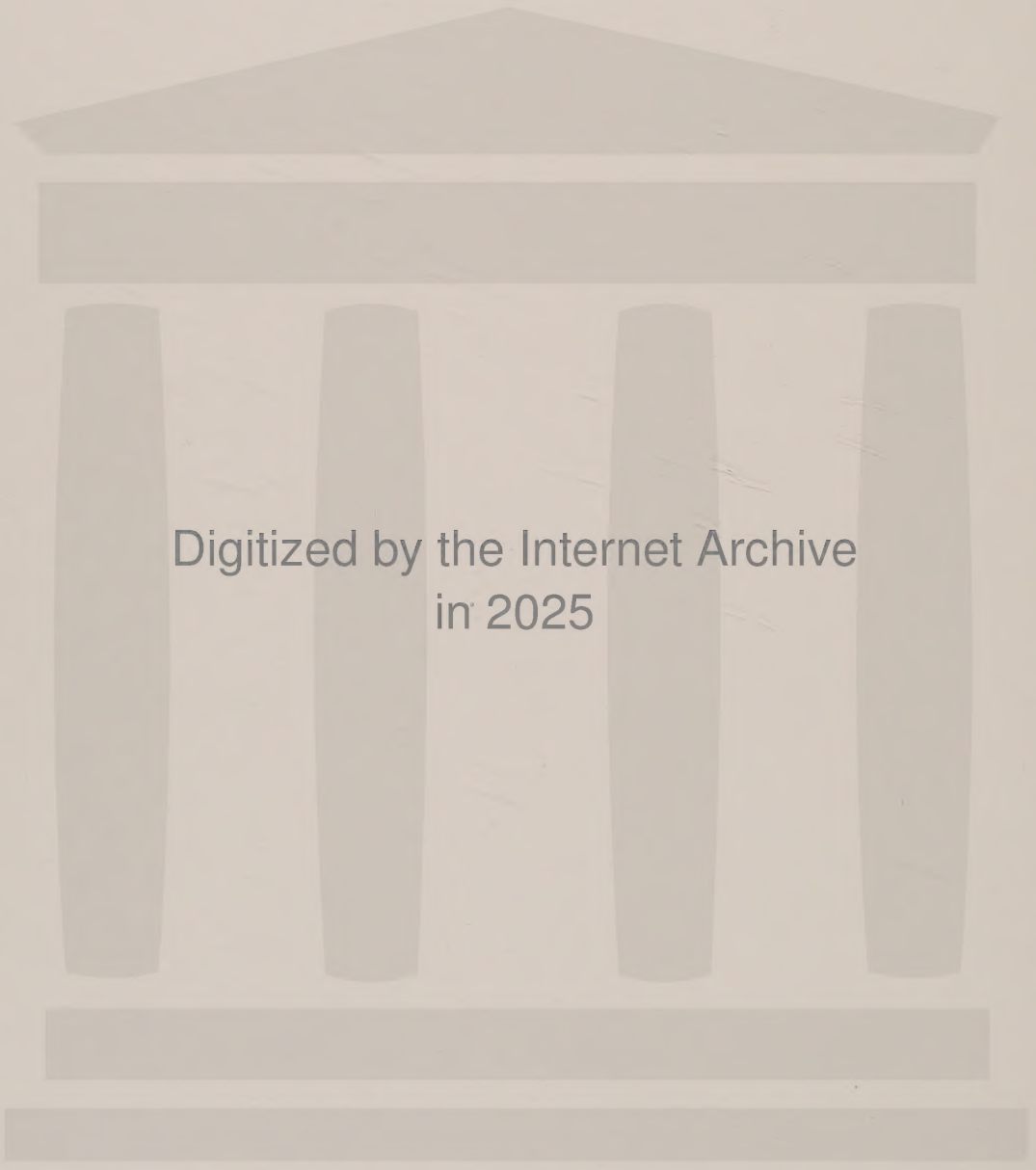
THE FIFTH FISHERIES CENSUS IN JAPAN

1973

STATISTICS AND INFORMATION DEPARTMENT
MINISTRY OF AGRICULTURE AND FORESTRY
GOVERNMENT OF JAPAN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FOREWORD

This is a report on the Fifth Fisheries Census of Japan taken in 1973, introducing a summary of the census results and the survey methods.

The Fisheries Censuses are taken for the purpose of clarifying the structure of fishery production, the structure of fishery employment and their back-ground. In Japan, the Fisheries Census had been conducted every five years since 1948. The 1973 census was the fifth of them.

Special features of the Fifth Fisheries Census were as follows. First, in the Survey of Inland water Fisheries, the working status of members of the river's fishery co-operatives was surveyed after twenty years absence. Second, computer tabulation was introduced for the first time for the Basic Survey of Marine Fisheries, in order to produce more detailed statistics and to save time. And third, the Census covered Okinawa Prefecture and Ogasawara Islands.

English editions of the Report on Fisheries Census of Japan had been published from the Third Fisheries Census taken for those of thereafter. This is the third of the English editions.

I am expecting that this report will be widely utilized in various works, research, study and other fields to deepen mutual understanding of fisheries in the countries of the world.

Since we intend to continue publication of English edition of the future census reports, your comments on this report will be highly appreciated for improvement of the future reports.

October 1975

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I. Outline of the Fifth Fisheries Census

1. Purpose of the census

The purpose of this census is to collect data on the structure of fishery production, data on the structure of fishery employment and data on the background condition of fishery production, which are needed for clarifying the changing state of fishery industry in the development process of Japanese economy. Those data are provided as basic statistics for fishery administration.

2. Outline of the census

(1) Surveys included

The census consists of three surveys, that is, the basic survey of marine fisheries, the survey of inland water fisheries and the survey of fishery districts (the survey of background conditions of marine fisheries).

(2) Survey objects and survey items

a. The basic survey of marine fisheries

(a) Survey objects

Fishery management units and fishery worker's households

(b) Major survey items

Items related to fishery management units

Type of fisheries, fishing boats used, cultural facilities used, number of days operated, number of fishery workers, value of catches sold, state of households, employment status of household members.

b. The survey of inland water fisheries

(a) Survey objects

Designated lakes or marshes fishery management units, inland water cultural management units, members of the river's fishery co-operatives, and inland water cultural co-operatives.

(b) Major survey items

(b)-1 Items related to designated lakes or marshes fishery management units,

Type of fisheries, species of fish caught, fishing boats used,

fishery workers, number of days engaged in fisheries, value of catches sold, state of households, working status of household members.

(b)-2 Items related to inland water cultural management units

Type of culture, method of culture, area of culture, workers engaged in culture, value of products sold, state of households, employment status of household members.

(b)-3 Items related to members of river's fishery cooperatives

Type of fisheries, species of fish caught, number of days engaged in fisheries, value of catches sold, state of households.

(b)-4 Items related to inland water fishery cooperatives

General condition of cooperatives, quantity of artificial-incubation and liberation actually made, number of persons played sport fishing.

c. The survey of fishery districts

(a) Survey objects

Fishery districts, fishing ports, ice-making, cold-storage and freezing plants, middlemen for fishery products, fishery processing plants.

(b) Major survey items

(b)-1 Items related to general condition of fishery districts

Composition of industries in the districts, number of households, population, geographical condition, destruction or abolishment of fishing grounds, status of facilities relating to fisheries, status of fish markets and wholesalers for fishery products, marketing of catches.

(b)-2 Items related to fishing ports.

Facilities of fishing ports, number of boats entered in fishing ports, landings made.

(b)-3 Items related to ice-making, cold-storage and freezing plants

Capacity of ice-making, cold-storage and freezing, number of workers, utilization made.

(b)-4 Items related to middlemen for fishery products

Type of management, dwelling place, business type, yearly traded value.

(b)-5 Items related to fishery processing plants

Type of processing, number of workers, yearly processing days, purchasing status of fishes for processing, draining facilities, value of products sold.

(3) Organization of the survey

a. The basic survey of marine fisheries and the survey of inland water fisheries

Ministry of Agriculture and Forestry – Prefectural Governments – Municipal Offices – Supervisors – Enumerators

b. The survey of fishery districts

Ministry of Agriculture and Forestry – Regional Agricultural Administrative Offices – Statistics and Information Offices – Branch Offices – Officials or Enumerators

(4) Date of the Survey

As of the first of November, 1973

3. Method of the survey

(1) Listing of survey objects

a. The basic survey of marine fisheries

The preparatory survey for listing of survey objects was carried out on the first of August in 1973. By the preparatory survey, enumeration districts for the preparatory survey were established in cities, towns and villages along the sea. In those enumeration districts which had many survey objects, enumerators visited all households in the enumeration district to identify survey objects. For the other enumeration districts, survey objects were listed by using existing data.

b. The survey of inland water fisheries and the survey of fishery districts.

The lists of survey objects were prepared by using existing data.

(2) Main survey

a. The basic survey of marine fisheries and the survey of inland water fisheries.

Both of the surveys were carried out by enumerators, intervewing survey objects individually.

b. The survey of fishery districts

The survey was carried out by field officials and enumerators interviewing survey objects and utilizing existing data.

4. Processing method

The survey results of the basic survey of marine fisheries were processed by electronic computer at the regional computer centers. The survey results of the survey of inland water fisheries and the survey of fishery districts were processed by manual in the branch offices.

5. Number of supervisors and enumerators

Number of supervisors and enumerators were as follows.

		Persons
(1) Supervisors		3,760
(2) Enumerators		53,265
a. The basic survey of marine fisheries		
(a) Preparatory survey	25,144	
(b) Main survey	18,544	
b. The survey of inland water fisheries		5,015
c. The survey of fishery districts		4,562

6. Expenditures

The total expenditure of this census from survey planning to publication was 1,150 million Yen.

7. Main differences between the Forth Fisheries Census and the Fifth Fisheries Census

(1) Coverage of the survey expanded to Okinawa prefecture and Ogasawara Islands.

(2) The survey related to river's fishery cooperative members and the survey related to inland water fishery cooperatives were added into the survey of inland water fishery.

(3) The processing of the survey results of the basic survey of marine fisheries was changed from manual processing to computer processing.

II. The process of survey planning on the Fifth Fishrries Census

The census planning started in April, 1971 toward the main survey to be taken on the first of November, 1973.

This starting time of census planning was one year earlier than the past censuses, because some length of time was needed for system design of computer tabulation applied for the basic survey of marine fisheries. The yearly progress of this census was as follows.

1. April, 1971-March, 1972

The preparatory study committee for the Fifth Fisheries Census was set up and the meeting was held three times and the meeting of the subcommittee was held two times to draw up a basic plan of the Fisheries Census. And the Statistics and Information Department held a meeting with the Fishery Agency to hear its opinions and requests as an administrative body.

2. April, 1972-March, 1973

The preparatory committee for the Fifth Fisheries Census was set up and it established a system of the census by referring to the results of the pilot survey, the pre-test survey and the full-dress pretest survey. Further improvements were made on boundary of the fishery districts as smallest units of statistical presentation so that the survey results will better clarify real situation of fisheries.

(1) Pilot survey

Field officers of the Ministry of Agriculture and Forestry carried out the pilot survey by using preliminary questionnaires. By this survey, survey items, survey method, concept and difinition of the survey items were examined.

(2) Pre-test survey

The pre-test survey was carried out by enumentors by using questionnaires which had been improved by the results of the pilot survey. By the pretest survey, extend of understanding of the enumerators for the survey items included, accuracy of answers of survey objects, suitable number of survey objects to be covered by one enumerator, and method of training of supervisors were tested.

(3) Full-dress pre-test survey

The full-dress pre-test survey was carried out on the census system designed as a result of the pilot survey and the pre-test survey, using similar procedure as the actual census. By the full-dress pretest survey, all aspect of the census were tested.

III. Summary of the results on the Fifth Fisheries Census

1. Basic survey of marine fishery

This survey was carried out to clarify the structure of production and the structure of employment of marine fisheries by enumerating marine fishery management units and fishery worker's households as survey objects. In comparing with the results of the Forth Fisheries Census, data on Okinawa prefecture were excluded from the results of the Fifth Census.

(1) Structure of fishery production and its changes

a. Present state of structure of production

The total number of management units was 232,302 in 1973. In viewing by the fisheries classes, the coastal fisheries class accounted for 95.7 percent of the total management units occupying an overwhelming majority, and the total number of management units of the medium and small size fisheries class and the large size fisheries class were only less than 10,000.

By the types of management, the individual management units were 96.9 per cent of the total number, and the group management units like companies were only 3.1 per cent.

On the other hand, in value of catches by fisheries classes, each of the coastal fisheries class, the medium and the small size fisheries class, and the large size fisheries class occupied about one third. This shows the fact that composition of the medium and small size and the large size fisheries classes was much higher in value of catches than in number of management units.

Table 1. Structure of fishery production by fisheries classes, (coastal fisheries class, medium and small size fisheries class, and large size fisheries class)

Fisheries classes	Number of management units		Number of powered boats		Tonnage of powered boats		Workers in season		Value of catches	
	Number	Composition	Number	Composition	Gross Tonnage	Composition	Number	Composition	Composition	Value of catches per a management unit
		percentage		percentage	gross ton	percentage	person	percentage	percentage	thousand yen
Total	232,302	100.0	177,622	100.0	2,038,665	100.0	659,256	100.0	100.0	5,830
Coastal	222,374	95.7	156,910	88.3	390,732	19.2	470,225	71.3	32.5	1,980
Medium & small size	9,713	4.2	18,582	10.5	708,997	34.8	135,501	20.6	35.1	48,980
Large size	215	0.1	2,130	1.2	930,945	46.0	53,530	8.1	32.4	2,043,580

Note: 1. The coastal fisheries class includes fisheries without fishing boats, fisheries using non-powered boats, fisheries using powered boats of less than ten gross tons, set-net fisheries, beach seine fisheries, and culture in marine water.

2. The medium and small size fisheries class includes fishery of using powered boats of over ten gross tons but less than 1,000 gross tons.
3. The large size fisheries class includes the size class of using powered boats of over 1,000 gross tons.
4. Data include those of Okinawa prefecture.

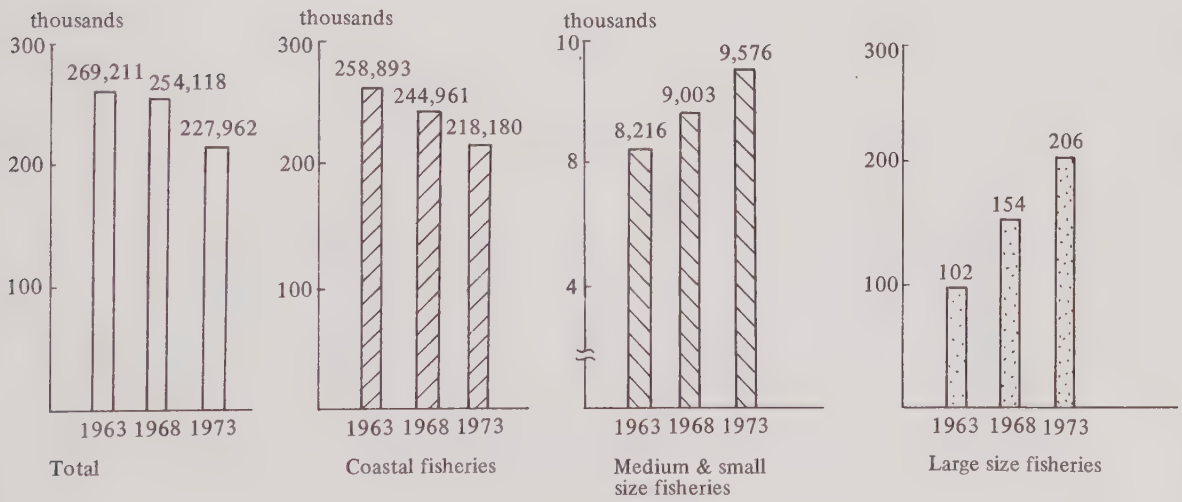
b. Change of the number of management units

The number of management units except Okinawa was 227,962 or 10.3 per cent less than five years ago. This decrease per cent is over two times of that from 1963 to 1968. It indicates that the decrease of management units becomes rapid. This tendency of decrease covers the whole country, but decrease in those area where the industrial zones of Japan are included is especially rapid.

In viewing change of the number of management units by fisheries classes, the number of management units of the coastal fisheries class decreased by 10.9 per cent, but both of the medium and small size fisheries class and the large size fisheries class increased by 6.4 per cent and 33.8 per cent respectively. The reason of decrease of management units in the coastal fisheries class is that productivity of this class has become comparatively low because of the worsened coastal fishing grounds and the rapid rise of productivity of the other industries.

On the other hand, increase of management units in the large size fisheries class and the medium and small size fisheries class was due to expansion of management size by enlarging fishing boats.

Fig. 1 Number of management units



Note: Excluding Okinawa

By types of management, the number of individual management units decreased by 11.1 per cent comparing with that of five years ago, but the number of group management units increased by 24.9 per

cent. Decrease of the individual management units was due to decrease of non-powered boats class (72.8 per cent decreased than that of five years ago), labor culture class (28.2 per cent decrease), and pearl and pearl oyster culture class (64.4 per cent decrease), etc.

Increase of group management units was due to increase of the joint management units and companies, especially the joint management units increased very rapidly (4.4 times increase).

Table 2. Number of management units by types of management

Types of management	Number of management units		Comparing with 1968
	Country total	Except Okinawa	
Total	232,302	227,962	89.7%
Individuals	224,968	220,723	88.9
– Company	2,018	1,995	111.0
– Fishery cooperative	281	276	72.3
– Fishery production association	237	237	87.1
– Joint management unit	4,710	4,645	143.1
– Government and public offices schools and research instituts	88	86	89.6

c. Change of the number of management units by fisheries classes

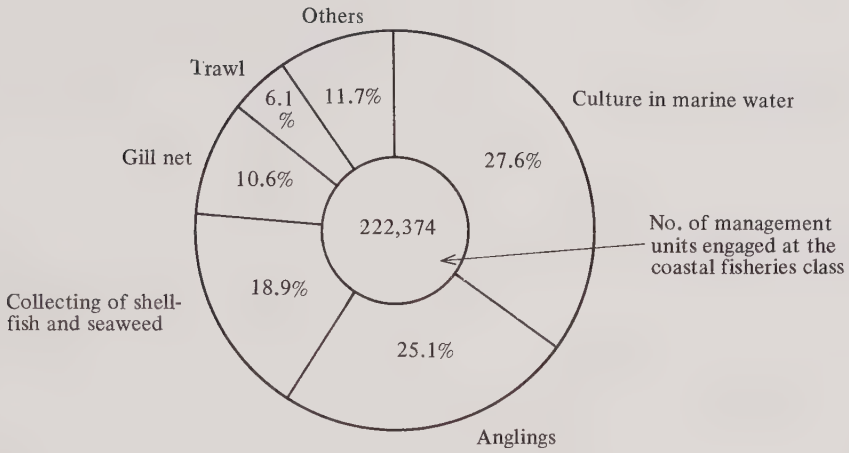
(a) Coastal fisheries class

The coastal fisheries class mainly consists of small size management units which are mostly operated by family labor. They are distributed widely in coastal areas of all over the country. The number of management units of this class was 222,374, or 95.7 per cent of the total number of management units. Management units of this class were mainly engaged in such types of fisheries as culture in marine water of laver, young yellowtail, and common scallop, fishing by angling, gill net, trawl, and collecting of shellfish and seaweed.

In viewing the number of management units by size of operation, percentage of the powered boats class was 58.8 per cent being the largest class, and percentage of the culture in marine water class was 28.2 per cent being the second class, and both classes accounted for about 90 per cent of the total.

In the powered boats class, powered boats of one to three gross tons class was the largest, and in the culture in marine water, laver culture was the largest.

Fig. 2. Number of management units by major type of fisheries



Reviewing changes of the numbers in classes during the past five years, the without fishing boats class and the non- powered boats class experienced a drastical decrease similar with that of the period of five years before 1968. The powered boats of less than one gross ton class increased as a result of diffusion of the out-board engines. Further, the powered boats of three to five gross tons class has grown up as the core-management units of the coastal fisheries, and has steadily increased during the.period of five years from 1963 to 1968.

On the other hand, the powered boars of five to ten gross tons class showed a trend of decreasing during 1963 to 1968 but it has changed to increasing of 33.3 per cent with a notable transfer from the lower class.

This seems to be due to the fact that fishing of this class has become possible only by family labor owing to labor saving mechanization.

As for culture in marine water, the laver culture class decreased considerably. Decrease of the pearl culture class and the pearl oyster culture class was very large, too. However, new types of culture such as the yellowtail, the seaweed and the common scallop culture classes expanded rapidly.

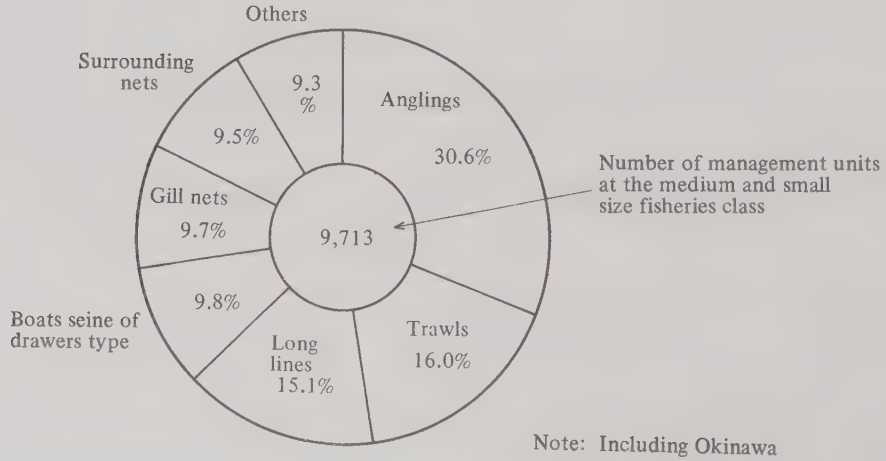
The number of workers in season decreased 20.8 per cent comparing with that of five years ago. Especially hired workers indecated 41.6 per cent decrease as the highest decreasing group. However, family workers decreased only 13.8 per cent. As a result the ratio of family labor power in the total labor power of coastal fisheries raised much.

Table 3. Change of number of management units in coastal fisheries

Management unit classes	Change since 1968 (1973/1968) x 100	Composition percentage (%)
Total, the coastal fisheries class	89.1	100.0
Without fishing boats	68.7	6.2
Using boats		
Non-powered boats only	37.4	3.4
Powered boats less than 1 gross ton	106.3	20.1
1 ~ 3	87.3	23.1
3 ~ 5	124.6	11.8
5 ~ 10 gross tons	133.3	3.8
Large set net	114.6	0.4
Small set net	111.1	2.6
Beach seine	74.3	0.4
Culture in marine water		
Laver cluture		
Without fishing boats	26.1	0.6
Using boats	77.8	17.0
Oyster culture	95.7	1.5
Pearl culture	55.3	0.9
Pearl oyster culture	39.0	0.7
Seaweed culture	239.0	4.4
Yellowtail culture		1.3
Common scallop culture		1.3
Other cultures		0.5

Note: Excluding Okinawa

Fig. 3 Number of management units by major type of fisheries



Note: Including Okinawa

(b) Medium and small size fisheries class

The number of management units in the medium and small size fisheries class was 9,713 or accounted for only 4.2 per cent of the total number. Major types of fisheries were squid angling, skipjack pole-and-line, off-shore trawl, trawl (west of 128°30′E), tuna long line, and surrounding net, etc. In size classes of operation, about a half of them (47.2 per cent) were the powered boats of 10–20 gross tons class which is considered as an extent of the coastal fisheries class. Next is the powered boats of 50–100 gross tons class, and the powered boats of over 100 gross tons class has a small number of units.

Table 4. Changes of number of management units by size of operation

Size of operation	Composition percentage (%)	Change since 1968 (1973/1968) ×100
Total, medium-small size fisheries	100.0	106.4
Powered boats of 10 ~ 20 gross tons	47.2	113.1
20 ~ 30	8.0	79.4
30 ~50	13.4	81.7
50 ~ 100	15.9	143.0
100 ~ 200	6.5	100.2
200 ~ 500	6.2	110.4
500 ~ 1,000 tons	2.8	111.1

Note: Excluding Okinawa

As for changes during five years, the powered boats of 20 to 30 gross tons class and 30 to 50 gross tons class decreased, especially the powered boats of 50 to 100 gross tons class indicated a notable increase.

These were due to lower class moving to upper class, in particular an increase of the powered boats of 50 to 100 gross tons class was due to enlarging of squid anglings and skipjack pole-and-line boats.

In viewing the number of management units by type of fisheries, skipjack pole-and-line and squid anglings increased, but long-line and trawl decreased.

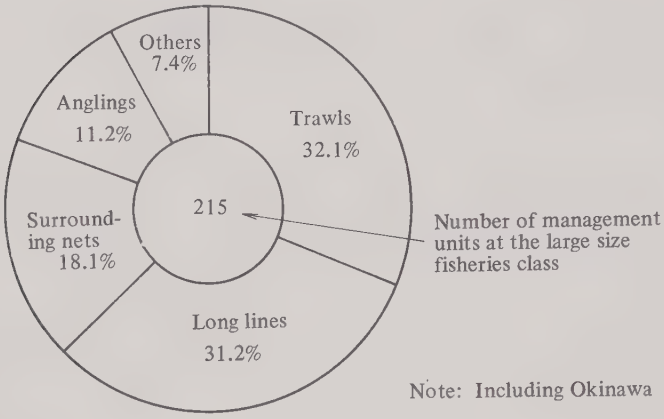
The number of workers in season decreased by 24.1 per cent and decrease rate was more than that of the coastal fisheries. It was due to decrease of the number of employees by 26.2 per cent. It indicated worsening situation in recent years of labor employment in the medium and small size fisheries class.

(c) Large size fisheries class

The number of management units at this class was 215, or accounted for only 0.1 per cent of total management units. A major type of fisheries was trawl, long line and surrounding net, etc.

As for changes of five years, the large size fisheries class became more important for increasing of number of management units and powered boats, tonnage of powered boats and number of workers in season, further for growing of value of catches much increased than that of before.

Fig. 4 Number of management units by major type of fisheries



Note: Including Okinawa

Table 5. Number of management units and powered boats, tonnage, number of workers in season and value of catches

Type of management	Number of management units		Powered boats				Workers in season		Value of catches
	Number	Ratio %	Number	Ratio %	Tonnage gross tons	Ratio %	Number persons	Ratio %	average of a management unit
									thousand yen
Total	232,302	100.0	177,622	100.0	2,038,665	100.0	659,256	100.0	5,830
Individuals	224,968	96.9	163,364	91.9	706,087	34.7	497,944	91.9	2,500
Companies	2,018	0.9	6,548	3.7	1,213,782	59.5	102,614	3.7	337,440
Fishery cooperatives	281	0.1	530	0.3	19,263	0.9	8,194	0.3	64,180
Fishery production association	273	0.1	691	0.4	24,065	1.2	6,283	0.4	86,810
Joint management units	4,710	2.0	6,346	3.6	50,266	2.5	42,337	3.6	14,680
Government and public offices, schools and research institute	88	0.0	143	0.1	25,202	1.2	1,884	0.1	36,840

Note: Including Okinawa

d. Composition by type of management

In viewing composition of fishery production by type of management, the invidivual management units and companies occupied a large weight. Although the individual management units accounted for more than 90 per cent of the total number of management units and powered boarts, they occupied

only 34.7 per cent of total tonnage of powered boats and 41.6 per cent of total amount of value of catches because the most of the individual management units were small size.

On the other hand, the number of companies accounted for only 0.9 per cent, but the total tonnage of powered boats accounted for 59.5 per cent and they earned more than half of total amount of value of catches. The joint management units accounted for 5.1 per cent of total amount of value of catches. The other types of management units occupied a small portion.

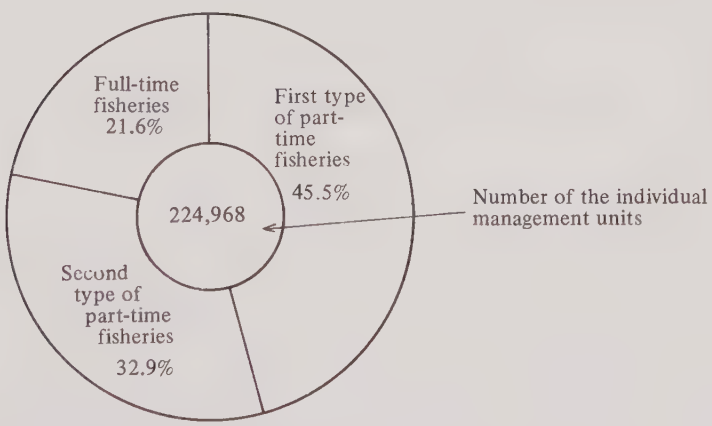
(2) Change of the individual management units

a. Number of the individual management units by full-time or part-time fisheries.

In viewing the number of management units of the individual management units by full-time and part-time, the first type of part-time management units (mainly engaged in fisheries) accounted for 45.5 per cent as the highest share, next was the second type of part-time management units (subsidiary engaged in fisheries) and the full-time management units was the last.

By the size of operation, in small size management units classes such as the without fishing boats class, the non-powered boats class and the powered boats of less than one gross ton class, the second type of part-time management units was more than a half of them, however, at the other classes the full-time and the first-type of part-time management units was more than a half of them. Especially at the powered boats of 5 – 10 gross tons class, the young yellowtail culture class and the common scallop culture class the full-time and the first type of part-time management units accounted for 90 per cent.

Fig. 5 Ratio of the individual management units by full-time or part-time

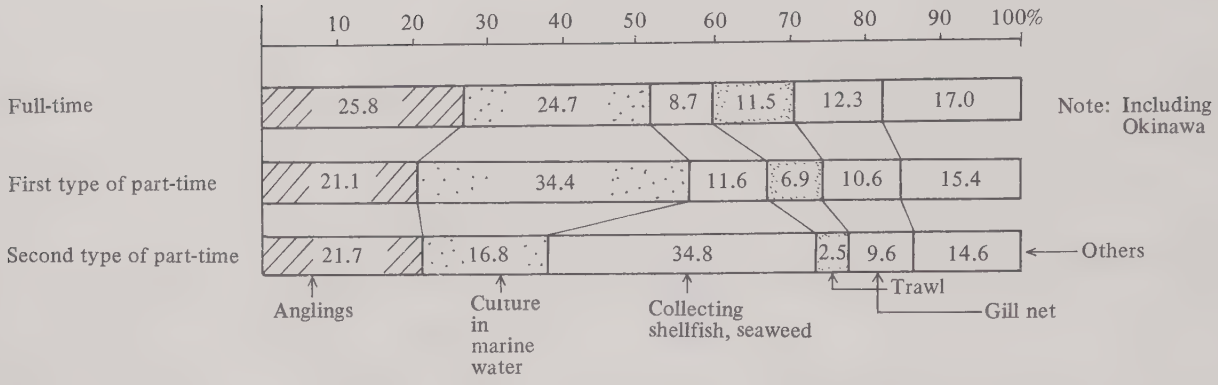


Note: Including Okinawa

By main type of fisheries, in full-time fisheries the management units mainly engaged in anglings were the largest number and next were culture in marine water, gill nets, trawls, and it is a feature of this type that a ratio of composition of trawls was higher than that of the part-time management units.

In the first type of part-time fisheries, the management units mainly engaged in culture in marine water were the largest number.

Fig. 6 Ratio of composition of management units by full-time or part-time and major type of fisheries



At the second type of part-time fisheries the management units mainly engaged in collecting of shellfish or seaweed were the largest number and next was angling and culture in marine water. It is a feature of this type that a ratio of composition of collecting of shellfish or seaweed which can perform easily in the coast was rather higher than that of other types. As for changes during the past five years, the second type of part-time fisheries, the first type of part-time fisheries and the full-time fisheries decreased by 13.3 per cent, 9.3 per cent and 3.0 per cent respectively. It indicated that the management units less depended upon fisheries decreased rapidly.

As a result, a ratio of the full-time fisheries in the individual management units became higher than that of past year. By fishery classes, the culture in marine water class indicated a tendency of growing in full-time fisheries and in first type of part-time fisheries. The ratio of composition of the full-time and the first type of part-time fisheries in this class rose up from 68.4 per cent in 1968 to 79.2 per cent in 1973. On the other hand, at the other classes of ratio of composition of the second type of part-time fisheries had risen.

b. Number of management units by type of part-time business

Out of the individual management units, the number of the part-time management units was 176,360, or accounted for 78.4 per cent of total. In viewing by type of part-time business, agriculture was the largest number in self-supporting part-time business and it was almost a half (50.9 per cent) of the part-time management units. In hired part-time business, a type of business employed off-fisheries accounted for 69.7 per cent, in which, almost a half of them was such unstable businesses as temporary or daily one.

The number of the part-time management units decreased by 12.9 per cent compared with that of five years ago. By type of business, the number of management units which engaged in agriculture as a part-time business decreased constantly during the periods of five years from 1963 to 1968, and from 1968 to 1973. On the other hand, the number of part-time management units which was employed in off-fisheries much increased. And reflecting an increase of people who enjoy sport fishing, the management units which engaged in guides for sport fishing increased.

Table 6 Ratio of part-time by type of part-time business

unit: %

Type of part-time	Selfsupporting business					Hired in		
	Agriculture	Fishery processing business	Guide for sport fishing	Run a seasonal inn	Others	Fisheries	Off-fisheries on	
							Permanent	Temporary
Total	50.9	2.2	4.8	2.1	15.5	20.8	36.4	33.3
The first type of part-time fisheries	48.8	2.7	5.8	1.9	12.2	18.1	32.1	30.7
The second type of part-time fisheries	54.5	1.4	3.4	2.4	20.2	24.6	42.5	36.8

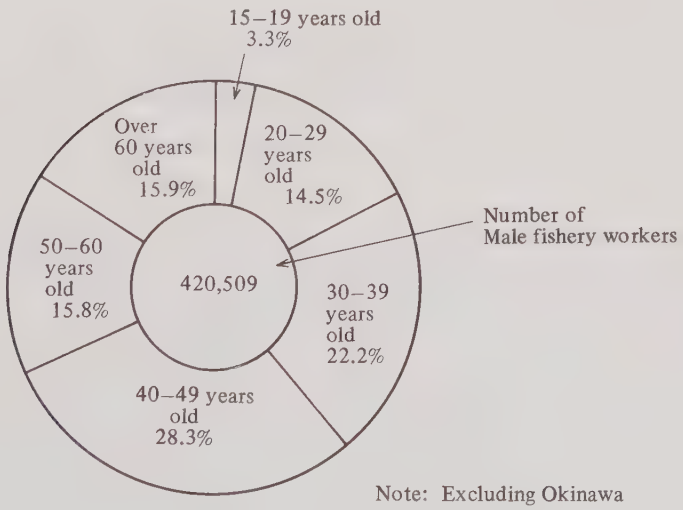
Notes: 1. It is counted as each of them when one management unit engaged in more than two part-time businesses, so that, it is not equal to 100 percent though adding each type of part-time business
2. Including Okinawa

(3) A tendency of fishery workers

a. General view

The number of fishery workers was 510,727. The number of workers except Okinawa was 503,787, and which was a decrease of 15.2 per cent, (male 14.8 per cent decrease, female 16.8 per cent decrease) than that of five years ago. This ratio of decrease was over than a decrease of 13.0 per cent of fishery households. In viewing change of five years about men by ages, 15 to 19 years old class decreased by 49.6 per cent, then 30 to 39 years old class and 20 to 29 years old class also decreased by 31 per cent and by 21.4 per cent respectively, where young labor force decreased notably. On the other hand, 40 to 49 years old class increased 12.1 per cent and over 60 years old class stayed only a decrease of 6.9 per cent, where an advancement of high aged on the labor force was seen remarkably.

Fig. 7 Composition of age classes of male fishery workers



Note: Excluding Okinawa

b. Number of fishery workers by self-supporting or hired

The number of fishery workers only engaged in self supporting fisheries accounted for 63.7 per cent of total number of fishery workers. Compared with five years ago, fishery workers engaged in both of self supporting fisheries and hired in other fishery management units decreased by 26.4 per cent, hired only in fishery decreased by 17.2 per cent and engaged in only self supporting fisheries decreased by 12.2 per cent, where a decrease of fishery workers engaged in both of self supporting fisheries and hired in other fishery management units was remarkable. It was due to the fact that workers faced with difficulties in having a chance of being employed in other fishery management units without leaving villages where they lived, because large fisheries centralized to big fishing ports far from their villages.

Fig. 8 Composition of fishery workers by own or hired

Note: Including Okinawa

c. Newly employed fishery workers

The number of newly employed fishery workers was 3,536, and was only 0.7 per cent of total number of fishery workers. The number of newly employed fishery workers except Okinawa was 3,475, which was a half of that of five years ago, showing a very bad situation in supporting the population of fishery workers.

In viewing the composition of newly employed fishery workers by ages, an advanced aged workers was a few, less than 29 years old accounted for 78.5 per cent of total number of newly employed fishery workers, so that, a young labor force has been supported to fishery workers through a small number. Inviewing the condition before they engaged in fisheries, the persons out of work accounted for 58.4 per cent and 92.1 per cent of them was in 15 to 19 years old class, therefore the most of them seems to be fresh-men. Out of total number of fresh-men in the fishery households, a ratio of workers engaged in fisheries was only 7.7 per cent, or decreased a little than that of five years ago, so that, it is worried that problems of fishery labor force and inheritor will be more serious in the future.

(4) A tendency of hired fishery worker's households

The number of hired fishery worker's households was 126,777, and that of excepting Okinawa was 125,142, or decreased by 15.8 per cent compared with five years ago. It indicated a larger decrease rate of the fishery worker's households than that of the number of management units.

In viewing by type of full-time or part-time fisheries, the households mainly employed in fisheries accounted for 46.2 per cent, occupied the largest number, and the households only employed in fisheries were 37.5 per cent, the households employed in fisheries as a subsidiary job were 16.0 per cent. A ratio of decrease in the households which employed in fisheries as a subsidiary job was 22.8 per cent, the households employed only in fisheries was 20.6 per cent much decreased respectively, but households mainly employed in fisheries stayed a decrease of 8.5 per cent. Due to the increase of employment opportunity and the higher wage in the other industries, many of the fishery worker's households engaged mainly in the other jobs left fishery industry, and many of the fishery worker's households engaged mainly in fisheries moved to those engaged mainly in the other industries.

Fig. 9 Yearly number of fishery worker's households

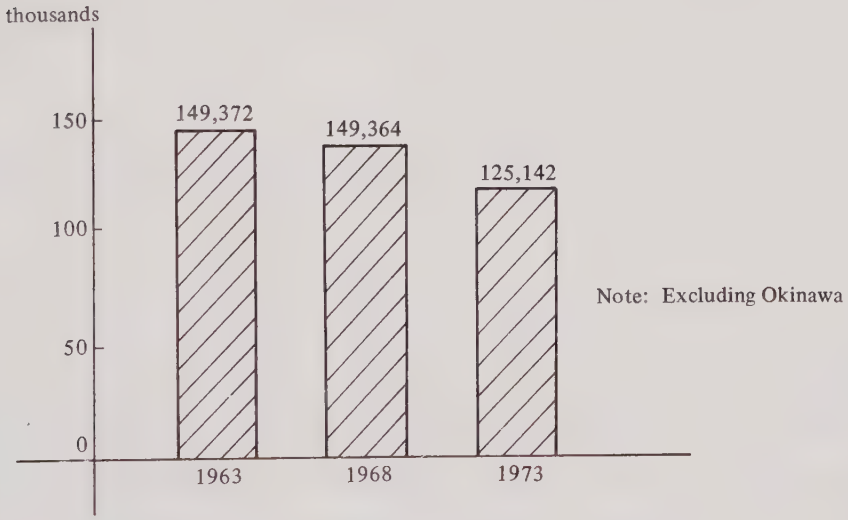


Table 7 Hired fishery worker's households by full-time or part-time

unit: %

Classification	Composition percentage (%)		Change since 1968 (1973/1968) x 100
	1968	1973	
Total	100.0	100.0	84.2
Only employed in fisheries	40.1	37.8	79.4
Mainly employed in fisheries	42.5	46.2	91.5
Employed in fisheries as a subsidiary job	17.4	16.0	77.2

Note: Excluding Okinawa

Table 8 Change of the number of fishing boats

unit: boats

Year	Total	Non-powered boats	Boats with out-board engine	Powered boats				
				Subtotal	Less than 1 gross ton	1 ~ 3	3 ~ 5	5 ~ 10
1968	345,606	95,701	74,115	175,790	29,053	94,792	31,394	6,580
1973	327,895	53,990	99,244	174,661	25,758	83,974	41,446	9,160
Compared with 1968 (%)	94.9	56.4	133.9	99.4	88.7	88.6	132.0	139.2

Note: Excluding Okinawa

Table 8. Change of the number of fishing boats (concluded)

Year	Powered boats							
	10 ~ 20	20 ~ 30	30 ~ 50	50 ~ 100	100 ~ 200	200 ~ 500	500 ~ 1,000	1,000 gross tons & over
1968	5,554	890	2,615	2,805	940	937	104	126
1973	6,340	386	1,743	3,232	1,116	1,286	75	144
Compared with 1968 (%)	114.2	43.4	66.7	115.2	118.7	137.2	72.1	114.3

Note: Excluding Okinawa

The number of fishing boats held by fishery management units was 331,274 as of first of November in 1973. Out of those, the powered boats were 177,622, or more than a half of total boats, the boats with out-board engine were 99,349, the non-powered boats were 54,303. Compared with five years ago, the boats with out-board engine increased by 33.9 per cent, on the contrary, the non-powered boats was a decrease of 43.6 per cent. As a result, it was the first time that the number of boats with out-board engine exceeded that of non-powered boats. An increase of the boats with out-board engine was mainly due to an increase of the culture in marine water class and the boats of less than one gross ton class. The number of powered boats of less than one gross ton and one to three gross tons class decreased, however, the powered boats of 3 to 5 gross tons and 5 to 10 gross tons class increased notably, and it is indicated that the size of powered fishing boats enlarged in coastal fisheries. Changes of the powered boats of over 10 gross tons were in various, in particular the powered boats of 200 to 500 gross tons indicated an increase of 37.2 per cent, on the other hand, the powered boats of 20 to 30 gross tons decreased less than half of that as notably.

2. The survey of fishery districts

This survey was carried out with an aim of grasping conditions on the background of marine fishery production, with such survey objects as industries relating marine fishery, fishing ports, fishery co-operatives located in coastal villages.

(1) Fishing ports

a. Number of fishing ports

The number of fishing ports and harbors, which fishing boats used in the past one year, was 3,528. These consisted of the first type of fishing ports counted 2,090, the second type of fishing ports counted 465, the third type of fishing ports counted 109, the fourth type of fishing ports counted 89 and the harbors counted 775. Almost all of types of fishing ports except the first type of fishing ports were an increase.

b. Facilities

The total length of quaies (the facilities with more than three meters of the depth of water used as mooring or loading by fishing boats) was 521 kilometers, and more than a half of that was in harbor. An average of length per a port was 148 meters, in particular an average of the third type of fishing ports was 764 meters as the longest one. A total length of landing places (the facilities with less than three meters of the depth of water used as mooring or loading by fishing boats) was 955 kilometers, and the harbors accounted for more than half of that as well as quaies. An average of length per a port was 271 meters, and that of the third type of fishing ports was 604 meters as the longest one.

The total area of mooring places was 54,975 hectares, and 81 per cent of those area belonged to the harbors. An average of area per a mooring place was 15.5 hectares, and in particular that of harbors was 57.5 hectares as a widest one. A total area of mooring basin (the facilities used as mooring on the land for boats) was 362 hectares, that of the first type of fishing ports accounted for 41 per cent of total area. An average of area per a port was 10 areas, and that of the third type of fishing ports was 35 ares as the widest one, and an average of the first type of fishing ports was only 7 ares.

Table 9 Number and tonnage of newly or repaired fishing boats

unit number : boats
tonnage : gross tons

Classification			1973	1968	Compared with 1968 (%)
New	Non-powered boats number		15,744 (15,743)	7,971	197.5
	Powered boats	Number	18,039 (17,831)	13,287	134.2
		Tonnage	291,474 (291,111)	314,213	92.6
Repaired powered boats		Number	89,237 (88,549)	69,495	127.4
		Tonnage	3,748,716 (3,737,830)	5,075,069	73.6

Note: Figures in ( ) were excluding Okinawa

c. A status of using of fishing ports

The real number of fishing boats used fishing ports in the past one year counted 630,000 (This figure

totalized real numbers by eash fishing port as a unit, so that, sometimes it was counted as a double), in which the powered boats of less than ten gross tons accounted for 73 per cent.

In viewing by type of fishing ports, the third type of fishing ports and the harbors were used highly by powered big boats of over than 50 gross tons, and were basements for the distant water fisheries. On the other hand, the first type of fishing ports were used highly by powered small boats of less than 10 gross tons.

(2) Facilities related to fisheries

a. Oil stations

The number of oil stations sold fuel to fishing boats in the past one year was 2,664, or increased by 19 per cent than that of five years ago. In viewing the oil station by number of workers, the stations employed less than three persons were 50 per cent, and the stations employed over 30 persons accounted for only 3 per cent.

A total capacity of fixed oil tanks held in stations was 600,000 kiloliters, or increased by 34 per cent than that of five years ago.

b. Shipyards

The number of shipyards which built or repaired fishing boats in the past one year was 3,439, or increased by 7 per cent than that of five years ago. In viewing size of shipyards by number of workers, the small size of shipyards employed less than three persons were 70 per cent of total number, and the large size of shipyards employed over 30 persons were 5 per cent. These shipyards built up various kind of new fishing boats. Out of new boats the non-powered boats were built up 15,744, the FRP (Fiberglass Reinforced Plastics) boats accounted for 73 per cent of them, and overed much than the wooden boats. The new powered boats were built up 18,039, out of them the wooden boats accounted for 49 per cent as the largest number, the FRP boats were 44 per cent and the steel boats were 7 per cent. The new powered boats increased in number, but decreased in tonnage, because small boats were built up many compared with five years ago.

Further, the repaired powered boats increased in number, and decreased in tonnage, too.

c. Shops for fishery material

The number of shops which directly dealt with fishermen in the past one year counted 5,476, out of them the shops for fishing nets and fishing gears were the largest number, and shops for paints, equipments for boats, commodity for culture, equipments for fishing operation and fish boxes. The shops for fishing nets and fishing gears increased by 27 per cent and the shops for equipments for fishing operation were a decrease of 30 per cent.

d. Iron works

The number of iron works which repaired fishing boats engines was 2,037, or increased by 14 per cent than that of five years ago. In viewing iron works by number of workers, the small size factories employed one to three persons increased, and on the contrary, the factories employed over 10 persons decreased.

e. Ice-making, cold-storage and freezing plants

The number of ice-making, cold-storage and freezing plants with main engine of over 5 horse power which handled fishery poruducts in the past one year was 4,710 or increased by 58 per cent than that of five years ago. The number of ice-making plants was 975 or decreased by 15 per cent than that of five years ago. It was due to a decrease of plants with less than 30 tons per a day of ice-making capacity.

The number of cold-storage plants was 4,694 or increased by 59 per cent than that of five years ago. It was due to an increase of small size plants the cold-storage capacity of which is less than 300 tons per a day.

The number of freezing plants was 2,439 or increased by 54 per cent than that of five years ago. It was mainly due to an increase of big plants which employed over 30 persons.

Note: A plant which has both of ice-making facility and cold-storage and freezing facility is counted in the both statistics, therefore, the total does not coincide with the net number of plants.

Table 10 Capacity of ice-making, cold-storage and freezing per a day

Classification	1973	1968	Compared with 1968 (%)
Capacity of ice-making per a day	20,746 metric tons (20,576)	21,294 metric tons	96.6
Capacity of cold storage	3,712,994 (3,698,776)	2,207,851	167.5
Capacity of freezing per a day	36,856 (36,732)	30,517	120.4

Note: Figures in ( ) were excluding Okinawa

f. Fishery processing plants

The number of fishery processing plants which processed fishery products for a purpose of selling in the past one year was 16,383 or decreased by 20 per cent than that of five years ago. In viewing by major type of processing, the plants processed to salted and dried products were 49 per cent of total plants as the largest number, next to the plants processed to kneaded products accounted for 17.4 per cent. Reviewing by number of workers, the small plants employed less than 9 persons were more than a half of total plants. the number of the plants processed to canned or bottled products decreased by 25 per cent, the plants processed to kneaded products decreased by 16 per cent and other plants were also decreased by 25 per cent as respectively compared with five years ago. However, in the plants processed kneaded, salted and dried, smoked products, there was an increase of 31 per cent of total quantity of raw fishes used for processing, as a result of an expantion of factory size.

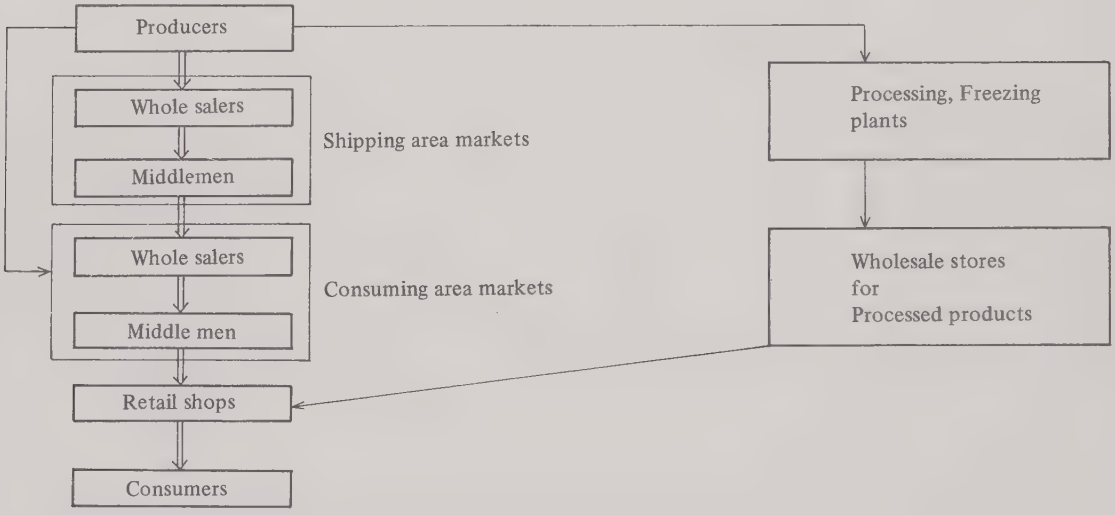
(3) Marketing of fishery products

The fishery products are needed to be handled to consumers quickly because those products are easily perished than other foods. In Japan, there are fish markets both side in the shipping area and the consuming area for smooth distribution of products.

a. Fish markets

The number of fish markets traded the primaly landings of fishing operators was 1,102 a total quantity of fishery products traded at those markets in a year was 8,360,000 tons and the value of those sold was 1370 billion yens. In viewing fish markets by traded value, the markets traded 100–500 million Yens class were 41 percent, and the markets traded less than 100 million Yens class adding to them, they occupied 77 per cent of total number of markets. However, the value and quantity traded at those markets were only 9 per cent. On the other hand, the number of markets traded over 2 billion Yens in a year accounted for 8 per cent of total number of markets, but the traded quantity and value were 73 per cent and 79 per cent respectively. The number of fish markets decreased by 11 per cent but the traded quantity and value indicated a rather increase compared with five years ago.

Fig. 10 Fundamental marketing channels for fishery products



b. Wholesalers (whole sale organs)

The number of wholesalers which made a business at fish markets was 1,199 and 85 per cent of them were managed by fishery cooperatives and fishery cooperatives associations. However, the wholesalers who made the business of over than 3 billion Yens in a year were almost companies, and they accounted for 72 per cent of total number of such class. The number of wholesalers was a decrease of 7 per cent than that of five years ago.

c. Middlemen for fishery products

The number of middlemen for fishery products was 48,324 and almost all of them were individual managements. The number of middlemen decreased by 12 per cent than that of five years ago which was over than a decreasing ratio of wholesalers. However, in viewing the number of middlemen by yearly traded value, it was found that the large size of middlemen increased comparing five years ago.

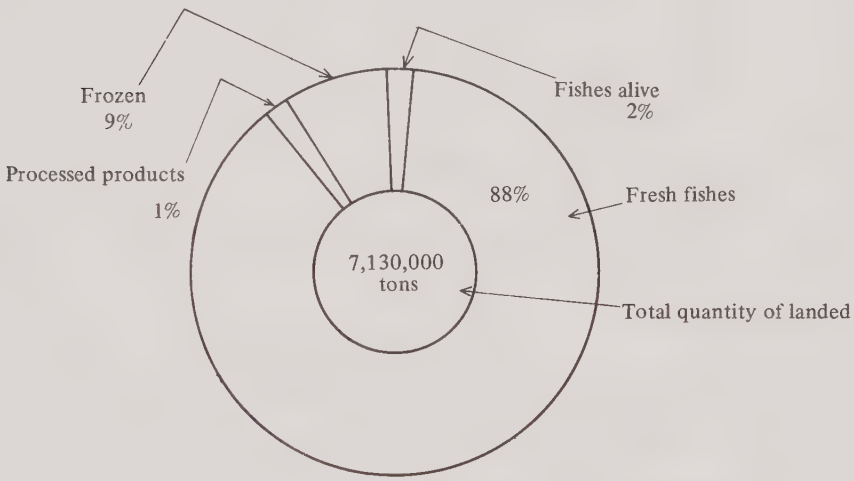
(4) Marketing status of caught fishes

a. Type of landing of caught fishes

A total quantity of landed fishes was 7,130,000* metric tons during January to December in 1972. In viewing landed fishes by type of primaly landing level, the fishes alive accounted for 2 per cent, the fresh fishes were 88 per cent, the frozen were 9 per cent and processed products were 1 per cent of total quantity respectively.

* This amounts of total landed fishes excluded the greater part of processed products processed on the boats and fishes landed in foreign countries. A total products (except whales) of fisheries and culture of Japan was 102,630,000 metric tons in 1972. (including Okinawa)

Fig. 11 Type of landed fishes



Note: Including Okinawa

b. Disposition for utilization of caught fishes

The fishery products traded at market accounted for 83 percent of total amounts of landed fishes of the fresh products and the frozen. The disposition for utilization of which was as follows, fishes for fresh accounted for 41 percent, fishes for processing were 40 percent and fishes for frozen were 19 percent respectively.

3. Inland water fishery

(1) Inland water cultures

a. Distribution of inland water cultures

The inland water culture spreaded throughout the country. The number of cities, towns and villages where located the inland water cultural management units accounted for 67 per cent of all municipalities.

b. Number of management units

The number of management units was 22,067 or rapidly increased by 69 per cent than that of five years ago. It was due to farmers suitably changing their business from rice crop to inland water culture, because the rice production diversification policy of government started in 1969.

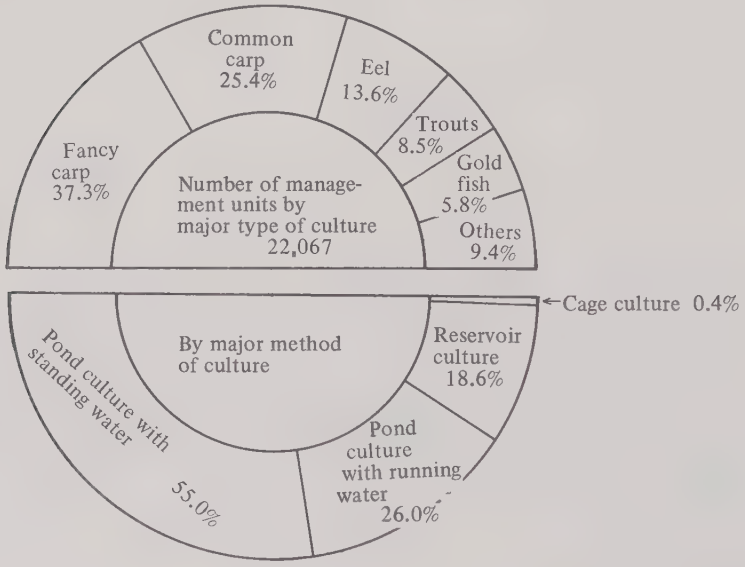
(a) Number of management units by major type and method of culture

In viewing management unit by major type of culture, the fancy carp culture was the largest number, and the common carp culture, the eel culture, the trouts culture and gold fish culture is following, and subtotal of those five type of culture accounted for 90.6 per cent of total number.

Comparing with five years ago, the number of management unit of fancy carp culture became twice, the eel culture was an increase of 80 per cent, the trouts culture was an increase of 60 per cent, the common carp culture and the gold fish culture were an increase of 40 percent respectively.

As for major method of culture, the pond culture with standing water method was more than a half of the total number.

Fig. 12 Proportion of major type and method of culture


Common carp 25.4%
Eel 13.6%
Trouts 8.5%
Gold fish 5.8%
Others 9.4%
Fancy carp 37.3%
Number of management units by major type of culture 22,067
←Cage culture 0.4%
By major method of culture
Reservoir culture 18.6%
Pond culture with running water 26.0%
Pond culture with standing water 55.0%

(b) Number of management units by type of management

In viewing by type of management, the individual management units accounted for 90 per cent of total number as an overwhelming. The group management units were less than 10 per cent, out of them the companies and the joint management units were rather many. Comparing five years ago, only the fishery cooperatives decreased than five years ago, but other type of management units increased.

(c) Number of management units by size of management

In viewing management units by number of worker engaged in culture, the management units engaged by one person were more than a half of total units, and the management units engaged by two or three persons adding to them, they accounted for over 90 per cent and most of them seems to be small size management units operated by family labor.

Reviewing by value of products, the management units which earned less than 300,000 Yen per a year were more than half of the total units

Table 11 Proportion of number of management units by number of workers

unit: %

Number of workers	1973	1968
Total	100.0	100.0
1 person	53.9	47.6
2 ~ 3	37.5	40.7
4 ~ 5	5.5	7.2
6 ~ 9	2.0	2.7
10 persons & over	1.1	1.8

Note: Excluding Okinawa

Table 12 Proportion of individual management units by full-time and part-time

unit: %

Classification of full-time, part-time	1973	1968
Total	100.0	100.0
Full time	5.7	6.6
First type of part-time	16.2	16.1
Second type of part-time	78.1	77.3
Ratio of part-time with agriculture	85.1	76.5

Note: Excluding Okinawa

c. Part-time work of the individual management units

In viewing the individual management units by full-time or parttime culture, the second type of part-time culture accounted for 78 per cent of total management units as an overwhelming number, the full-time culture were only 5.7 per cent.

In viewing the part-time management units by type of part-time business, management units which engaged in agriculture accounted for 85.1 per cent of the total number, out of them the management units which mainly engaged in agriculture and engaged in fish culture as a subsidiary job were more than half. It shows that the inland water culture in Japan has close connection with agriculture and it is often operated as a subsidiary job to agriculture.

(2) Fisheries in designated lakes or marshes

Catches of fisheries in designated lakes or marshes accounted for 93.4 per cent of total catches of fisheries in lakes or marshes in 1973.

a. Number of management units

The number of management units was 6,496, which was almost as many as five years ago. Picking up ten lakes and marshes of large number of management units, 88.3 per cent of total management units were included. As for the number of management units by size of operation, the powered boats of one to three gross tons class was the largest number and following order as the boats with outboard engine class, the non-powered boats class, the without fishing boats

class and the powered boats of 3 to 5 gross tons class. Reviewing by major type of fisheries, the gill nets accounted for 19 per cent of total number as the largest one and the set nets were 14 per cent and the casting nets were 9 per cent and the trawl were 9 per cent. Reviewing by number of workers, the management units engaged by two or three persons were 48 per cent of total number as the largest number, the management units engaged by one person were 44.3 per cent, therefore those two classes engaged by less than three persons were 92.3 per cent. By number of days engaged in fisheries, from 90 to 140 days class were 28 percent of total as the largest one, from 30 to 89 days class accounted for 22 per cent.

b. Fishing boats

The number of fishing boats was 7,321, out of those the powered boats were 40 per cent, and next to the boats with outboard engine were 30 per cent and the non-powered boats were 30 per cent. A total number of fishing boats was almost as many as five years ago, however, each of the powered boats and the non-powered boats decreased by 23 per cent and 17 per cent respectively, on the contrary, the boats with outboard engine were an increased of 59 per cent.

Table 13 Number of management units by lake or marsh
(10 lakes or marshes from the uppermost rank)

Name of Lakes or Marshes	Prefecture	Number of management units		Compared with 1968
		1973	1968	
Biwako	Shiga	1,766	1,600	110 %
Kasumigaura	Ibaragi	1,054	1,157	91
Shinjiko	Shimane	722	843	86
Kitaura	Ibaragi	617	559	110
Hachirogata	Akita	346	392	88
Ogawaranuma	Aomori	291	229	127
Inbanuma	Chiba	278	159	175
Sotonasakaura	Ibaragi	260	290	90
Suwako	Nagano	196	199	98
Hinuma	Ibaragi	195	159	123
Others 26 lakes		761	853	89
Total of 37 designated lakes or marshes		6,496	6,440	101

(3) Numbe of members of the fisheries cooperatives in river

The number of members of the fisheries cooperatives in river was 342,667 persons. In viewing members by major type of fisheries, the anglings were 70.6 per cent as the largest number, and next to the casting nets and the gill nets. Reviewing by fish species as the main objectives of catches, sweet fish was caught by 71.3 per cent of all cooperative members as the largest one, and following

order as dace, crucian carp and common carp. By number of days engaged in fisheries, the cooperative member engaged in fisheries with less than 29 days were 66.6 per cent of total, and the cooperative member engaged in fisheries with over 150 days were only 1 per cent.

IV. Fishery and culture production of Japan, in 1973

1. Total production

The total production of Japan in 1973 when the Fifth Fisheries Census was conducted was 10,690,000 metric tons, or accounted for 16.3 per cent of total production in the world (65,700,000 metric tons) and it was the biggest one in the world. Further, it was an much increase of 23.3 per cent than that of five years ago.

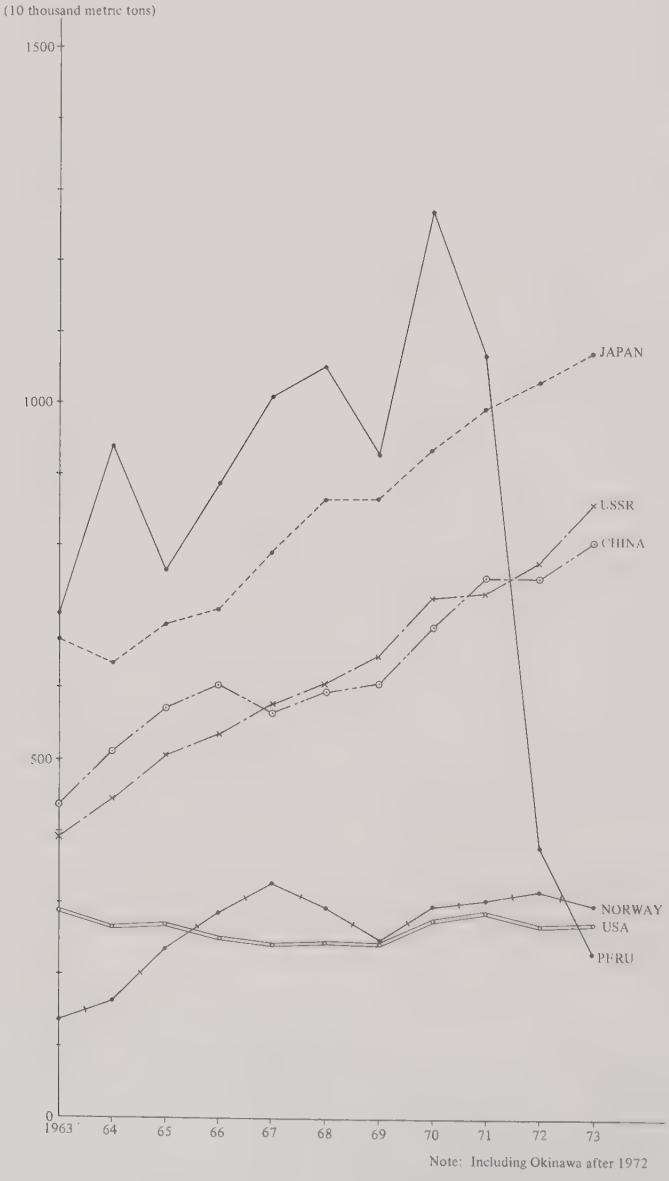


Fig. 13 Fishery production by countries

2. Production by fishing grounds

Japanese fishing boats have operated almost over all fishing grounds in the world. In viewing the production by fishing ground, the production in the Pacific Ocean was 10,210,000 metric tons, or was 95 per cent of total production as the largest quantity, and following order as the Atlantic Ocean, the inland water of Japan and the Indian Sea. Out of the production in the Pacific Ocean, the production in the north west Pacific Ocean accounted for 83 per cent. The production in the Pacific Ocean was an increase of 26.5 per cent than that of five years ago.

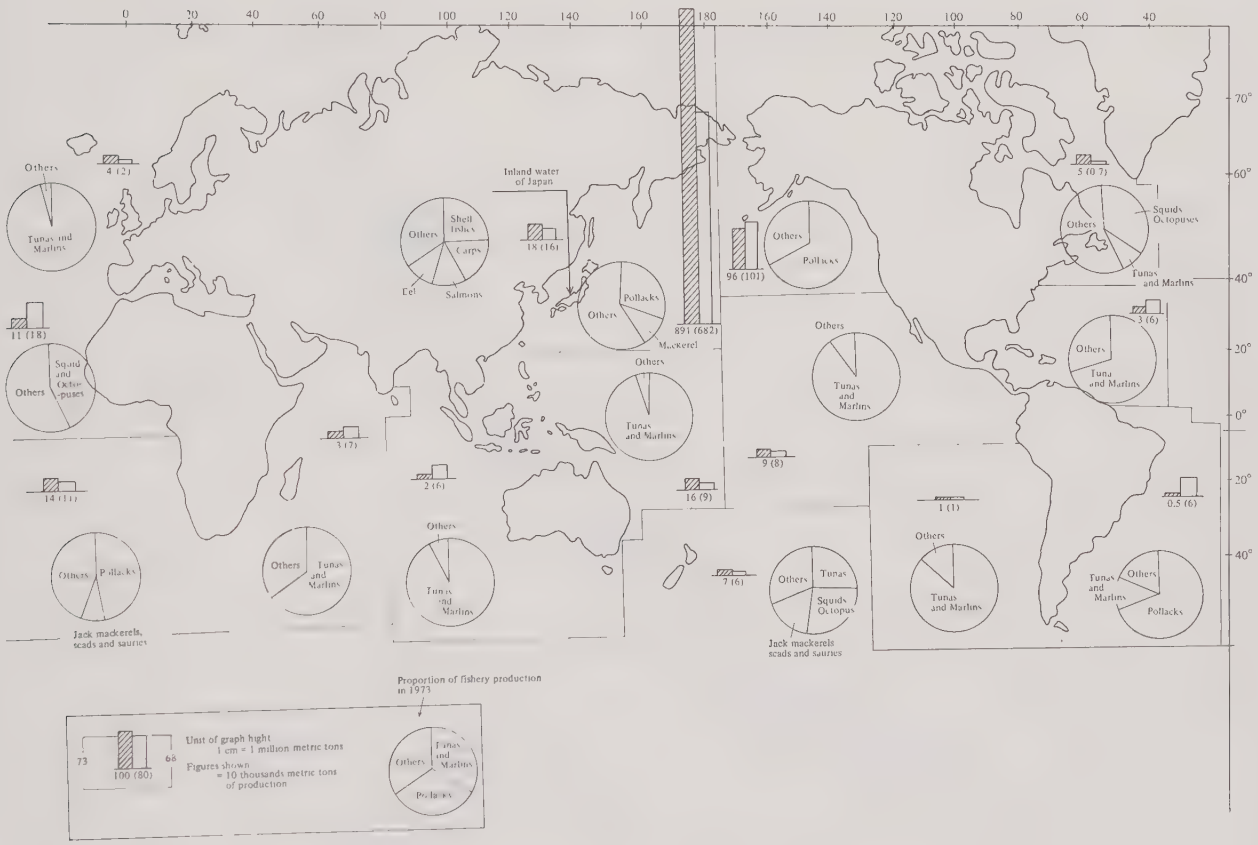


Fig. 14 Fishery production by fishing areas of Japanese fisheries in 1973

Note: Excluding Okinawa in 1968

3. Production by sector of fisheries

The state of production of fisheries and cultures by the coastal fisheries, the off-shore fisheries, the distant water fisheries and inland water fisheries is as follows.

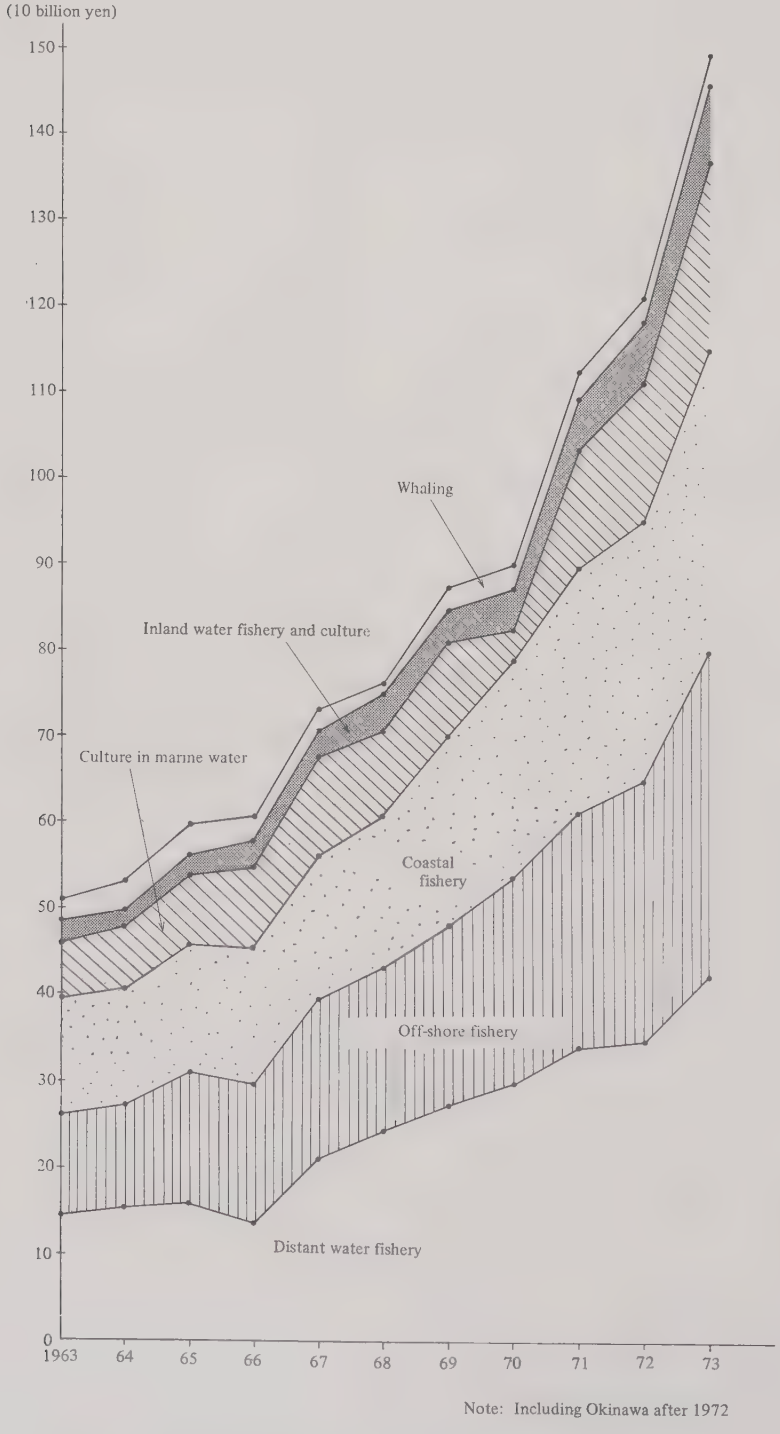


Fig. 15 Value of production by fishery and culture sectors

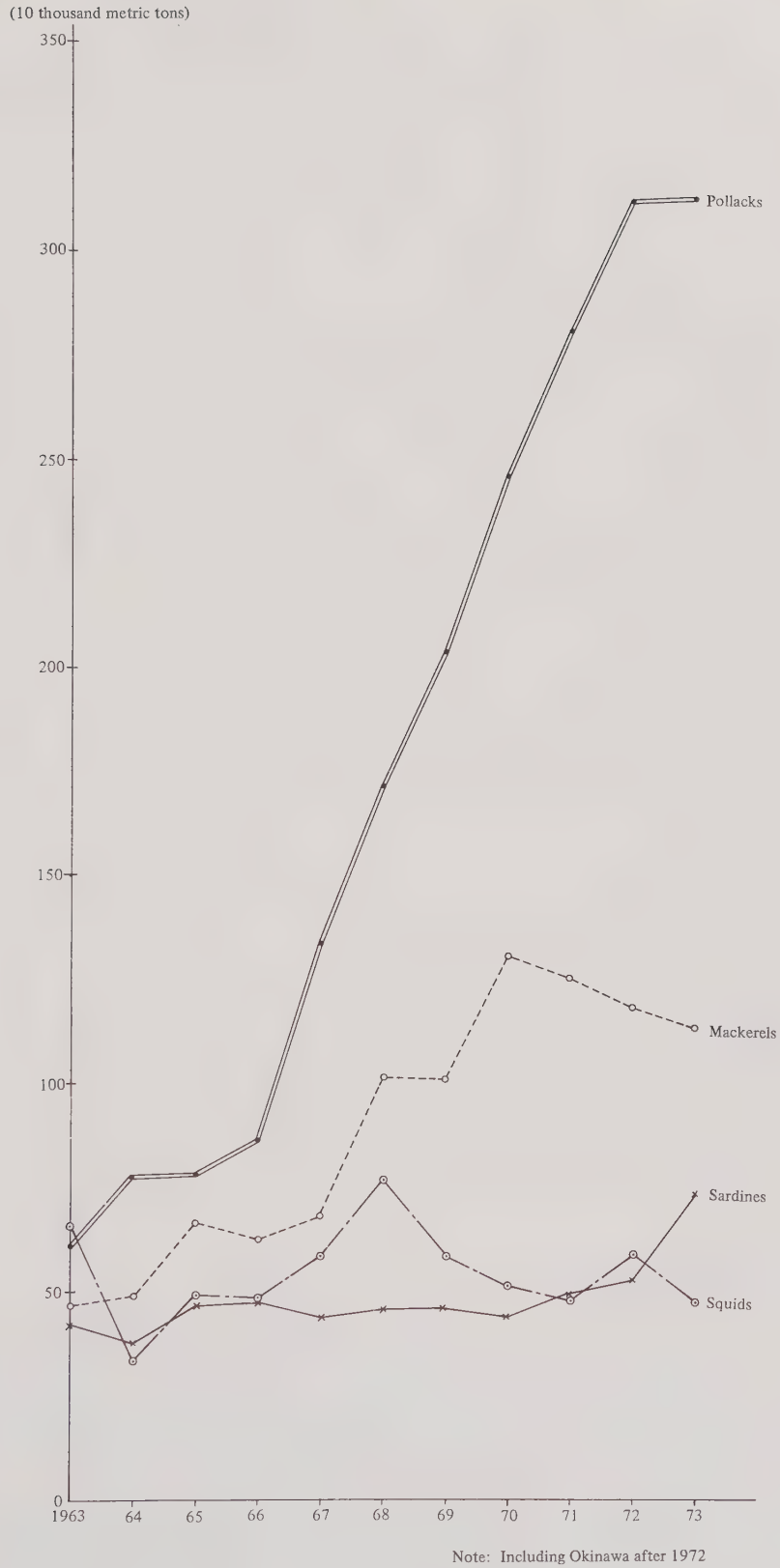


Fig. 16 Fishery production by fish species

(1) Coastal fisheries

The coastal fisheries have been carried out by the small size of capturings and cultures without boats or with boats of less than 10 gross tons at the coastal area, and major types of operations are the angling, the long line, the gill net, the set net, the collecting of shellfishes or seaweeds and the culture in marine water. The production in 1973 was 2,610,000 metric tons, or was 24.8 per cent of total production and increased by 3.1 per cent than that of five years ago.

(2) Off-shroe fisheries

The off-shore fisheries have been carried out by boats of 10 to 200 gross-tons class on the continental shelf of off-shroe and around there. The objectives of catching is saurels, mackerels, sauries, sardines and other migratory fishes and bottom fishes. The major types of operations are the off-shore medium trawll, the salmon drift gill net, the squid angling, and the surrounding net. The production in 1973 was 3,940,000 metric-tons or was 37.5 per cent of total production and increased by 24.9 per cent than that of five years ago.

(3) Distant water fisheries.

The distant water fisheries have been carried out on the sea area far from Japan. The major types of operation are the factory ship type trawl, the distant water trawl, the tuna long line, the skipjack pole-and-line, the factory ship type salmon fishing etc. The production was 3,960,000 metric tons or was 37.7 per cent of total production and it was a much increase of 40.0 per cent than that of five years ago.

(4) Inland water fisheries

The production was 180,000 metric tons or accounted for 1.7 per cent of total production, and it indicated an increase of 14.9 per cent than that of five years ago. The inland water fisheries are divided into two types of fisheries as the inland water cultures and the inland water captures, and the production of inland water captures was 64.1 per cent, the production of inland water cultures was 35.9 per cent of total production of inland water fisheries, and both of production increased than that of five years ago.

4. Production by fish species

In viewing the fishery production by fish species in current years in Japan, in particular Pollacks, mainly consisted of alsaka pollack, were caught remarkably. The production of pollacks was 3,020,000 metric tons or was 29.3 per cent of total production and it indicated a much increase of 82.5 per cent than that of five years ago.

Mackerels, sardines, squids were caught at large amount, further, sauries, flat fishes, tunas and skipjacks were also caught over than 100,000 tons. It is characteristics in Japanese fisheries that the caught fishes, collected shellfishes or seaweeds are covered various species and almost all of them are supplied for foods.

V. Definitions of survey word.

I. Relating to the basic survey of marine fishery

(1) Fishery management unit

This refers to a business unit that caught or cultures the aquatic animals and plants in marine water for the purpose of selling for one year prior to the survey day, however, except for the individual management units which worked less than 30 days in a year.

(2) Type of management

a. Individual management unit

This refers to a management unit of individual management type

b. Company

This refers to a management unit that is registered as a company on the Commercial law or the Limited Company law.

c. Fishery cooperative

This refers to a fishery cooperative on the Fishery Cooperative Association law that managed fisheries

d. Fishery production association

This refers to a fishery production association on the Fishery Cooperative Association law.

e. Joint management unit

This refers to a management unit in which two or more persons jointly own major means of production such as fishing boat and fishing net and jointly operate and manage fisheries.

f. Government and public office, school and research institute

This refers to such a management unit as government and public office, school and research institute which operated fisheries and sold catches.

g. Group management unit

This refers to a management unit other than the individual management unit, ie fishery cooperative, joint management and company, etc.

(3) Size of operation

This is a basic classification of fishery management units classified on the basis of the major type of fisheries the type of fishing boats and the total tonnage of powered boats used.

a. Type of fisheries classes classified on the basis of the type of fisheries mainly operated. They are the large set net class, the small set net class, the beach seine class and culture in marine water class.

b. Classes other than mentioned above are classified into 14 classes from the fishery without

fishing boats to the powered boats of over 1,000 gross tons of pwoered boats by kinds of fishing boats and total tonnage of powered boats. However, the management unit operated fisheries by using only the boat with outboard engine is included in the class of the powered boats with less than one gross ton.

(4) Fishing boat

This refers to a boat which was used for fishery production and is held by the fishery management unit as of the survey date. It includes not only main boats but also attached boats used in various kinds of fishing which operated fishery together with main boats. In surrounding net fishery, for example, not only main boat but also transporting boats and other supporting boats are accounted as fishing boats.

(5) Worker in season

This refers to the number of workers at the time when the most persons engaged in fisheries in a year in each management unit, so that it should be noted that the total number of workers in season in a district does not mean the net number of workers in that district.

(6) Value of catches

It refers to a value that is summed up the value of catches sold and the value of home consumption converted to money in a year.

(7) Full-time or part-time fishery on the individual management unit

a. Full-time fishery

This refers to the individual management unit nobody of the member of which engaged in jobs other than own fisheries.

b. Part-time fishery

This refers to the individual management unit some members of which engaged in other jobs than own fisheries.

c. First-type of part-time fishery

This refers to the management unit that mainly engaged in own fisheries.

d. Second type of part-time fishery.

This refers to the management unit that engaged in own fisheries as a subsidiary job.

(8) Hired fishery worker's household

This refers to a household some member of which engaged in the fishing operation on the sea for 30 days or more per a year under employment of another person's management unit for the purpose of earning the wage for living expenses in a year prior to the survey day.

(9) Fishery worker

This refers to a person of more than 15 years old in the member of fishery workers household who engaged in the fishing operation on the sea for more than 30 days per a year under own fisheries or employment of another person's fishery management unit.

2. Relating to the survey of fishery districts

(1) Fishery district

This refers to a district that was established within a city, town or village by the Ministry of Agriculture and Forestry as such an area in which fisheries can be operated under a common social and natural conditions.

(2) Fishing port

This refers to the fishing port which was designated by the Fishing Poart law, and the general harbor which was used by fishing boats during the past one year before the survey day. However, the fishing port which was not used by fishing boats during one year prior to the survey day is not included in this category even if it was designated by the Fishing Poart law.

(3) Type of fishing port.

a. First type of fishing port

This refers to a fishing port whose utilization sphere is limited to local fishermen.

b. Second type of fishing port

This refers to a fishing port whose utilization sphere is wider than that of the first type of fishing port and not so wide as that of the third type of fishing port.

c. Third type of fishing port

This refers to a fishing port whose utilization sphere is nation-wide.

d. Fourth type of fishing port

This refers to a fishing port which lies in an outlying island or remote corner of our country, and is essential for devlopment of fishing grounds and for refuging of fishing boats from storms.

e. Harbor

This refers to a harbor which is used by fishing boats out of general harbors.

(4) Fish market

This refers to the market where fishing boats landed products directly and the market that made a trading on the primary step to receive fishes and production area with a overland route transportation is included in this category.

(5) Wholesalers for fishery products

This refers to a person who took a wholesale business at fish market in accordance with shipper's (including producer) with concerning a trust purchase for wholesale.

(6) Middlemen for fishery products

This refers to a person or a juridical person registered as the wholesaler above mentioned who purchases fishery products bought from the wholesalers.

3. Relating to the survey of inland water fisheries

(1) Inland water culture management unit

This refers to a management unit which producted such fishes in the inland water as young fish for culture or liberalization and as adult fish for the purpose of obtaining profits or living expenses by selling them during the past one year before the survey day.

(2) Pond culture

This type of culture refers to a culture which is operated in a artificial pond. In case of that a reservoir is used only for culture, it is regarded as this type of culture.

a. Pond culture with standing water

This type of culture refers to a culture conducted in a pond with standing water. It includes a culture using water moving machine and oxygen mixing machine in order to keep disolved oxygen in proper quantity, or using a system of pouring underground or river water in order to keep good condition of water quality.

b. Pond culture with running water.

This type of culture refers to a culture which is run with running water inflowing new water and outflowing used water at all times so that a good condition is kept for fish living.

(3) Culture in reservoir

This refers to the culture that used the pond or marsh which is used usually for other purpose, such as irrigation and storage for water.

(4) Culture in netting-preserve

This refers to culture conducted by setting the net preserve in a part of lakes, marshes or rivers.

(5) Designated lake or marsh

The 37 lakes or marshes that are designated by the Minister of Agriculture and Forestry for this survey.

(6) Fishery management unit in designated lakes or marshes

This refers to a management unit (household and establishment) that engaged in capture or culture of fishes or plants for a purpose of earning profits or living expenses in designated lakes or marshes.

(7) Co-operative member of river's fisheries

This refers to a member of fishery co-operative (except an associated member) that is consisted of persons who engaged in capture or culture of fishes or plants in the rivers where are instituted the right of fisheries.

(8) Inland water fishery cooperative

This refers to a fishery cooperative or its association that is consisted of persons who engaged in capture or culture of fishes or plants in inland water.

I. Basic structure on marine fishery

(1) Basic composition of management units

a. Size of Operation

Size of operation		No. of management units	Fishing boats	
			No. of non-powered boats	No. of boats with outboad engine
Total	1	232,302	54,303	99,349
Without fishing boats	2	14,686	–	–
Using boats				
Non-powered boats only	3	7,793	7,573	–
Using powered boats				
less than 1 ton	4	45,892	4,031	34,165
1 ~ 3	5	51,078	5,040	8,161
3 ~ 5	6	25,933	2,469	4,992
5 ~ 10	7	8,250	1,069	1,869
10 ~ 20	8	4,575	643	793
20 ~ 30	9	777	147	162
30 ~ 50	10	1,330	182	135
50 ~ 100	11	1,523	182	172
100 ~ 200	12	627	68	37
200 ~ 500	13	603	55	30
500 ~ 1,000	14	278	31	8
1,000 tons and over	15	215	7	17
Large set net	16	832	1,287	308
Small set net	17	5,755	2,099	2,406
Beach seine	18	808	697	365
Culture in marine water				
"Nori" laver culture				
without boats	19	1,275	–	–
using boats	20	37,161	20,949	31,363
Oyster culture	21	3,245	1,460	1,767
Pearl culture	22	1,878	1,219	1,136
Pearl oyster cultuer	23	1,468	525	684
"Wakame" seaweed culture	24	9,562	2,255	7,290
Young yellowtail culture	25	2,841	1,436	984
Common scallop culture	26	2,888	533	1,520
Other cultures	27	1,029	346	985

b. Type of management

Type of management		No. of management units	Fishing boats	
			No. of non-powered boats	No. of boats with outboad engine
Total	1	232,302	54,303	99,349
Individual	2	224,968	50,776	96,955
Company	3	2,018	1,027	417
Fishery cooperative	4	281	344	126
Fishery production association	5	237	275	91
Joint management	6	4,710	1,846	1,733
Government and public offices, schools,		88		
research institutes	7	88	35	27

Fishing boats			No. of workers engaged in works on the sea in season			Average value of production per a management unit	
Powered boats			No. of workers	Family workers	Employees		
No. of boats	Tonnage (gross ton)	Horse-power					
177,622	2,038,664.94	7,824,069	659,256	400,524	258,732	583	1
–	–	–	19,585	19,455	130	27	2
–	–	–	11,305	10,720	585	31	3
15,700	11,441.90	74,588	68,540	65,763	2,777	66	4
52,478	93,549.11	631,267	82,906	77,526	5,380	116	5
28,140	102,288.11	686,114	55,601	44,253	11,348	221	6
11,685	57,780.40	347,660	28,107	16,560	11,547	466	7
6,782	65,859.80	382,955	27,483	9,282	18,201	978	8
1,826	18,266.16	103,755	7,405	2,016	5,389	1,672	9
2,585	51,874.90	285,596	15,611	2,696	12,915	2,651	10
3,173	109,209.41	575,499	26,036	2,208	23,828	5,587	11
1,532	89,316.61	453,556	17,178	716	16,462	11,301	12
1,612	188,785.06	866,633	24,001	228	23,773	20,360	13
1,072	185,684.82	661,069	17,787	74	17,713	37,384	14
2,130	938,945.32	1,954,702	53,530	7	53,523	204,358	15
1,812	13,719.86	68,435	17,789	5,209	12,580	4,655	16
5,223	13,121.16	72,474	19,678	12,283	7,395	253	17
380	1,009.10	5,669	8,597	3,760	4,837	153	18
–	–	–	2,960	2,687	273	59	19
22,761	52,799.58	369,444	89,295	78,191	11,104	269	20
3,058	9,106.14	44,233	8,469	6,147	2,322	312	21
2,304	5,522.58	34,142	10,112	4,002	6,110	705	22
980	1,523.67	8,629	3,563	2,864	699	151	23
5,151	7,425.03	45,908	21,633	19,684	1,949	111	24
4,334	14,614.05	109,187	11,005	5,730	5,275	1,496	25
2,473	5,798.78	36,541	7,342	5,988	1,354	262	26
431	1,023.39	6,013	3,738	2,475	1,263	525	27

Fishing boats			No. of workers engaged in works on the sea in season			Average value of production per a management unit	
Powered boats			No. of workers	Family workers	Employees		
No. of boats	Tonnage (gross ton)	Horse-power					
177,622	2,038,664.94	7,824,069	659,256	400,524	258,732	583	1
163,364	706,086.78	4,008,266	497,944	372,665	125,279	250	2
6,548	1,213,782.07	3,283,264	102,614	–	102,614	33,744	3
530	19,263.47	78,314	8,194	3,353	4,841	6,418	4
691	24,064.80	96,672	6,283	1,439	4,844	8,681	5
6,346	50,266.04	290,810	42,337	23,067	19,270	1,468	6
143	25,201.78	66,743	1,884	–	1,884	3,684	7

c. Number of management units by main type of fishery

Type of fisheries		Total	Fisheries without fishing boat	Using boats		
				Non-powered boats only	Using powered boats	
					Less than 1 gross ton	1~3
Total	1	232,302	14,686	7,793	45,892	51,078
Factory ship type						
whaling	2	–	–	–	–	–
trawls	3	17	–	–	–	–
tuna long line	4	1	–	–	–	–
salmon fishing	5	126	–	–	–	–
crab fishing	6	1	–	–	–	–
North Pacific Ocean long line and gill net	7	10	–	–	–	–
Coastal whaling	8	13	–	–	–	–
Trawls						
Distant water trawl	9	116	–	–	–	–
Trawl, west of 128° 30′E	10	58	–	–	–	–
Off shore trawls						
One boat operation	11	443	–	–	–	–
Two boats operation	12	82	–	–	–	–
Small trawl	13	13,450	28	18	406	3,961
Other trawls	14	1,092	2	20	153	450
Purse seines						
One boat operation	15	697	–	6	14	32
Two boats operation	16	355	3	2	8	13
Other surrounding nets	17	993	142	16	37	163
Lift nets						
Saury stick-held dipnet	18	255	1	–	2	8
Other lift nets	19	1,528	43	37	204	459
Gill nets						
Salmon drift gill net	20	791	–	–	10	15
Other gill nets	21	23,686	532	789	7,033	10,171
Pole-and-line, angling						
Skipjack pole-and-line	22	1,942	4	3	109	476
Mackerel pole-and-line	23	590	–	5	76	287
Squid angling	24	13,610	92	341	1,758	4,692
Other anglings	25	34,619	438	1,499	10,691	16,300
Long line						
Tuna long line	26	907	–	–	13	8
Salmon long line	27	567	–	1	18	35
Alaska pollack long line	28	68	2	2	–	2
Other long lines	29	6,353	29	90	915	3,022
Beach seine	30	808	–	–	–	–
Boat seine of drawers type	31	666	1	14	13	82
Boat seine	32	2,912	22	20	55	752
Large set net	33	832	–	–	–	–
Small set net	34	5,755	–	–	–	–
Shellfish collecting	35	17,649	5,350	1,222	7,230	2,978
Seaweed collecting	36	2,4398	4,487	2,667	12,407	3,564
Other capturing fisheries	37	15,327	3,475	1,038	4,594	3,561
Culture in marine water						
"Nori" laver culture	38	38,436	–	–	–	–
Oyster culture	39	3,245	–	–	–	–
Pearl culture	40	1,878	–	–	–	–
Pearl oyster culture	41	1,468	–	–	–	–
"Wakame" seaweed culture	42	9,562	–	–	–	–
Young yellowtail culture	43	2,841	–	–	–	–
Common scallop culture	44	2,888	–	–	–	–
Other cultures	45	1,029	–	–	–	–
Inland water fisheries and culture	46	238	35	3	146	47

Using boats									
Using powered boats									
3~5	5~10	10~20	20~30	30~50	50~100	100~200	200~500	500~1,000	
25,933	8,250	4,575	777	1,330	1,523	627	603	278	1
–	–	–	–	–	–	–	–	–	2
–	–	–	–	–	11	1	1	–	3
–	–	–	–	–	–	–	1	–	4
–	–	–	–	–	51	38	34	2	5
–	–	–	–	–	–	–	1	–	6
–	–	–	–	–	–	1	6	2	7
1	1	1	–	3	–	1	–	–	8
–	–	–	–	–	1	–	28	38	9
–	–	–	–	–	–	2	19	20	10
–	–	22	35	109	165	62	43	5	11
–	–	1	2	1	15	50	12	1	12
6,261	1,877	831	36	14	14	4	–	–	13
354	85	23	2	1	–	–	–	1	14
78	63	118	65	91	112	25	43	18	15
14	18	50	37	39	95	31	29	9	16
326	147	92	18	37	13	1	1	–	17
31	105	51	4	25	19	7	2	–	18
444	196	86	36	18	5	–	–	–	19
96	225	67	15	68	174	71	39	8	20
3,595	1,064	361	47	29	46	8	10	1	21
738	112	109	16	75	112	69	70	27	22
144	27	18	2	17	10	4	–	–	23
3,236	1,319	1,122	89	264	467	144	70	14	24
4,571	844	235	9	19	9	2	1	1	25
32	45	182	11	79	91	77	175	128	26
72	167	135	68	46	16	6	3	–	27
6	12	27	7	8	2	–	–	–	28
1,469	422	186	36	166	12	4	1	–	29
–	–	–	–	–	–	–	–	–	30
105	100	84	100	125	41	1	–	–	31
1,044	421	443	103	49	3	–	–	–	32
–	–	–	–	–	–	–	–	–	33
–	–	–	–	–	–	–	–	–	34
705	124	27	2	1	3	3	3	1	35
930	300	37	3	3	–	–	–	–	36
1,677	576	265	33	43	36	15	11	2	37
–	–	–	–	–	–	–	–	–	38
–	–	–	–	–	–	–	–	–	39
–	–	–	–	–	–	–	–	–	40
–	–	–	–	–	–	–	–	–	41
–	–	–	–	–	–	–	–	–	42
–	–	–	–	–	–	–	–	–	43
–	–	–	–	–	–	–	–	–	44
–	–	–	–	–	–	–	–	–	45
4	–	2	1	–	–	–	–	–	46

Type of fisheries		1,000 gross tons and over	Large set net	Small set net	Beach seine
Total	1	215	832	5 755	808
Factory ship type					
whaling	2	–	–	–	–
trawls	3	4	–	–	–
tuna long line	4	–	–	–	–
salmon fishing	5	1	–	–	–
crab fishing	6	–	–	–	–
North Pacific Ocean long line and gill net	7	1	–	–	–
Costal whaling	8	6	–	–	–
Trawls					
Distant water trawl	9	49	–	–	–
Trawl, west of 128°30′E	10	17	–	–	–
Off shore trawls					
One boat operation	11	2	–	–	–
Two boats operation	12	–	–	–	–
Small trawl	13	–	–	–	–
Other trawls	14	1	–	–	–
Purse seines					
mmmmmm					
One boat operation	15	32	–	–	–
Two boats operation	16	7	–	–	–
Other surrounding nets	17	–	–	–	–
Lift nets					
Saury stick-held dipnet	18	–	–	–	–
Other lift nets	19	–	–	–	–
Gill nets					
Salmon drift gill net	20	3	–	–	–
Other gill nets	21	–	–	–	
Pole-and-line, angling					
Skipjack pole-and-line	22	22	–	–	–
Mackerel pole-and-line	23	–	–	–	–
Squid angling	24	2	–	–	–
Other anglings	25	–	–	–	–
Long line					
Tuna long line	26	66	–	–	–
Salmon long line	27	–	–	–	–
Alaska pollack long line	28	–	–	–	–
Other long lines	29	1	–	–	–
Beach seine	30	–	–	–	808
Boat seine of drawers type	31	–	–	–	–
Boat seine	32	–	–	–	–
Large set net	33	–	832	–	–
Small set net	34	–	–	5,755	–
Shellfish collecting	35	–	–	–	–
Seaweed collecting	36	–	–	–	–
Other capturing fisheries	37	1	–	–	–
Culture in marine water					
"Nori" laver culture	38	–	–	–	
Oyster culture	39	–	–	–	–
Pearl culture	40	–	–	–	–
Pearl oyster culture	41	–	–	–	–
"Wakame" seaweed culture	42	–	–	–	–
Young yellowtail culture	43	–	–	–	–
Common scallop culture	44	–	–	–	–
Other cultures	45	–	–	–	–
Inland water fisheries and culture	46	–	–	–	–

Culture in marin water									
"Nori" laver		Oyster	Pearl	Pearl oyster	"Wakame" seaweed	Young yellowtail	Common scallop	Others	
Without boats	Using boats								
1,275	37,161	3,245	1,878	1,468	9,562	2,841	2,888	1,029	1
–	–	–	–	–	–	–	–	–	2
–	–	–	–	–	–	–	–	–	3
–	–	–	–	–	–	–	–	–	4
–	–	–	–	–	–	–	–	–	5
–	–	–	–	–	–	–	–	–	6
–	–	–	–	–	–	–	–	–	7
–	–	–	–	–	–	–	–	–	8
–	–	–	–	–	–	–	–	–	9
–	–	–	–	–	–	–	–	–	10
–	–	–	–	–	–	–	–	–	11
–	–	–	–	–	–	–	–	–	12
–	–	–	–	–	–	–	–	–	13
–	–	–	–	–	–	–	–	–	14
–	–	–	–	–	–	–	–	–	15
–	–	–	–	–	–	–	–	–	16
–	–	–	–	–	–	–	–	–	17
–	–	–	–	–	–	–	–	–	18
–	–	–	–	–	–	–	–	–	19
–	–	–	–	–	–	–	–	–	20
–	–	–	–	–	–	–	–	–	21
–	–	–	–	–	–	–	–	–	22
–	–	–	–	–	–	–	–	–	23
–	–	–	–	–	–	–	–	–	24
–	–	–	–	–	–	–	–	–	25
–	–	–	–	–	–	–	–	–	26
–	–	–	–	–	–	–	–	–	27
–	–	–	–	–	–	–	–	–	28
–	–	–	–	–	–	–	–	–	29
–	–	–	–	–	–	–	–	–	30
–	–	–	–	–	–	–	–	–	31
–	–	–	–	–	–	–	–	–	32
–	–	–	–	–	–	–	–	–	33
–	–	–	–	–	–	–	–	–	34
–	–	–	–	–	–	–	–	–	35
–	–	–	–	–	–	–	–	–	36
–	–	–	–	–	–	–	–	–	37
1,275	37,161	–	–	–	–	–	–	–	38
–	–	3,245	–	–	–	–	–	–	39
–	–	–	1,878	–	–	–	–	–	40
–	–	–	–	1,468	–	–	–	–	41
–	–	–	–	–	9,562	–	–	–	42
–	–	–	–	–	–	2,841	–	–	43
–	–	–	–	–	–	–	2,888	–	44
–	–	–	–	–	–	–	–	1,029	45
–	–	–	–	–	–	–	–	–	46

d. Number of management units by size of operation

Size of operation		Total	Individual managment units
Total	1	232,302	224,968
Without fishing boats	2	14,686	14,672
Using boats			
Non-powered boats only	3	7,793	7,728
Using powered boats			
less than 1 gross ton	4	45,892	45,807
1 ~ 3	5	51,078	50,803
3 ~ 5	6	25,933	25,453
5 ~ 10	7	8,250	7,777
10 ~ 20	8	4,575	4,090
20 ~ 30	9	777	603
30 ~ 50	10	1,330	1,028
50 ~ 100	11	1,523	920
100 ~ 200	12	627	312
200 ~ 500	13	603	231
500 ~ 1,000	14	278	60
1,000 gross tons and over	15	215	8
Large set net	16	832	266
Small set net	17	5 755	5 045
Beach seine	18	808	536
Culture in marine water			
"Nori" laver culture			
without boats	19	1,275	1,253
using boats	20	37,161	36,399
Oyster culture	21	3,245	3,220
Pearl culture	22	1,878	1,695
Pearl oyster culture	23	1,468	1,449
"Wakame" seaweed culture	24	9,562	9,350
Young yellowtail culture	25	2,841	2,513
Common scallop culture	26	2,888	2,829
Other cultures	27	1,029	921

e. Number of management units by value of catches

Size of operation		Total	Less than 100 thousand yen	100 ~ 300	300 ~ 500
Total	1	232,302	13,193	27,273	21,802
Without fishing boats	2	14,686	4,827	5,483	2,003
Using boats					
Non-powered boats only	3	7,793	1,808	3,070	1,381
Using powered boats					
less than 1 gross ton	4	45,892	3,934	10,900	8,444
1 ~ 3	5	51,078	907	3,965	5,404
3 ~ 5	6	25,933	86	439	739
5 ~ 10	7	8,250	23	64	90
10 ~ 20	8	4,575	7	18	17
20 ~ 30	9	777	2	1	2
30 ~ 50	10	1,330	2	–	3
50 ~ 100	11	1,523	3	–	–
100 ~ 200	12	627	3	—	2
200 ~ 500	13	603	6	–	–
500 ~ 1,000	14	278	–	1	–
1,000 gross tons and over	15	215	3	–	–
Large set net	16	832	3	3	7
Small set net	17	5,755	48	385	448
Beach seine	18	808	52	115	93
Culture in marine water					
"Nori" laver culture					
without boats	19	1,275	452	374	151
using boats	20	37,161	656	1,320	1,503
Oyster culture	21	3,245	32	153	203
Pearl culture	22	1,878	17	63	73
Pearl oyster culture	23	1,468	21	124	173
"Wakame" seaweed culture	24	9,562	177	667	953
Young yellowtail culture	25	2,841	30	8	8
Common scallop culture	26	2,888	44	37	67
Other cultures	27	1,029	50	47	38

Companies	Fishery cooperatives	Fishery production associations	Joint management units	Government & public offices, schools, research institute	
2,018	281	237	4,710	88	1
–	1	–	13	–	2
–	4	2	59	–	3
–	8	–	77	–	4
1	12	3	259	–	5
9	3	2	466	–	6
19	9	2	442	1	7
43	11	9	421	1	8
28	2	5	139	–	9
129	6	19	147	1	10
384	16	33	164	6	11
237	6	8	47	17	12
297	10	23	12	30	13
193	3	9	1	12	14
195	5	3	1	3	15
120	73	45	328	–	16
25	27	14	644	–	17
–	1	3	268	–	18
–	9	–	12	1	19
8	3	5	742	4	20
4	–	2	18	1	21
168	1	11	3	–	22
10	1	2	6	–	23
–	17	3	189	3	24
105	29	28	163	3	25
–	5	1	53	–	26
43	19	5	36	5	27

500 thousand ~ 1 million	1 ~ 2	2 ~ 5	5 ~ 10	10 ~ 50	50 ~ 100	100~1,000	1,000 million yen and over	
46,163	57,300	44,884	11,003	7,807	1,286	1,542	85	1
1,632	618	117	4	2	–	–	–	2
1,127	344	52	9	2	–	–	–	3
12,972	7,390	2,074	124	54	–	–	–	4
15,500	18,099	6,778	373	50	2	–	–	5
3,633	9,734	9,570	1,494	235	3	–	–	6
523	1,851	3,537	1,484	644	30	4	–	7
84	364	1,224	1,229	1,595	34	3	–	8
7	20	90	163	473	13	6	–	9
6	14	62	137	958	135	13	–	10
–	2	23	56	756	462	221	–	11
1	1	9	9	144	164	291	3	12
–	–	1	2	38	98	452	6	13
1	–	–	–	9	16	244	7	14
1	–	–	–	2	2	139	68	15
13	15	49	74	444	140	83	1	16
1,211	1,653	1,452	343	204	9	2	–	17
182	186	145	24	9	2	–	–	18
158	81	47	6	5	–	1	–	19
4,593	10,033	14,534	3,772	730	18	2	–	20
533	893	932	306	186	4	3	–	21
182	461	651	209	175	29	18	–	22
423	426	232	50	19	–	–	–	23
2,938	3,682	1,111	28	5	1	–	–	24
58	212	578	836	951	110	50	–	25
281	954	1,235	221	45	3	1	–	26
104	267	381	50	72	11	9	–	27

(2) Individual management units

a. Number of management units by main type of fisheries

Factory ship type		Total	Fisheries without fishing boat	Using boats		
				Non-powered boat only	Using powered boats	
					Less than 1 gross ton	1 ~ 3
Total	1	224,968	14,672	7,728	45,807	50,803
Factory ship type						
Whaling	2	–	–	–	–	–
Trawls	3	4	–	–	–	–
Tuna long line	4	–	–	–	–	–
Salmon fishing	5	26	–	–	–	–
Crab fishing	6	–	–	–	–	–
North Pacific Ocean long line and gill net	7	2	–	–	–	–
Coastal whaling	8	4	–	–	–	–
Trawls						
Distant water trawl	9	15	–	–	–	–
Trawl, west of 128°30′	10	1	–	–	–	–
Off shore trawls						
One boat operation	11	257	–	–	–	–
Two boats operation	12	17	–	–	–	–
Small trawl	13	13,151	27	18	405	3,934
Other trawls	14	1,078	2	18	151	446
Purse seines						
mmmmmm						
One boat operation	15	423	–	5	14	32
Two boats operation	16	205	3	2	8	12
Other surrounding nets	17	881	141	16	35	153
Lift nets						
Saury stick-held dipnet	18	198	1	–	2	8
Other lift nets	19	1,453	43	34	201	444
Gill nets						
Salmon drift gill net	20	581	–	–	10	15
Other gill nets	21	23,337	524	773	7,008	10,091
Pole-and-line, angling						
Skipjack pole-and-line	22	1,786	4	3	109	474
Mackerel pole-and-line	23	569	–	5	76	287
Squid angling	24	13,308	92	341	1,758	4,678
Other anglings	25	34,500	438	1,497	10,684	16,288
Long line						
Tuna long line	26	577	–	–	13	8
Salmon long line	27	554	–	1	18	35
Alaska pollack long line	28	35	2	2	–	1
Other long lines	29	6,263	29	90	909	3,017
Beach seine	30	536	–	–	–	–
Boat seine of drawers type	31	493	1	14	13	81
Boat seine	32	2,540	22	18	54	710
Large set net	33	266	–	–	–	–
Small set net	34	5,045	–	–	–	–
Shellfish collecting	35	17,555	5,349	1,199	7,201	2,958
Seaweed collecting	36	24,375	4,486	2,656	12,403	3,560
Other capturing fisheries	37	15,066	3,473	1,033	4,589	3,524
Culture in marine water						
"Nori" laver culture	38	37,652	–	–	–	–
Oyster culture	39	3,220	–	–	–	–
Pearl culture	40	1,695	–	–	–	–
Pearl oyster culture	41	1,449	–	–	–	–
"Wakame" seaweed culture	42	9,350	–	–	–	–
Young yellowtail culture	43	2,513	–	–	–	–
Common scallop culture	44	2,829	–	–	–	–
Other cultures	45	921	–	–	–	–
Inland water fisheries and culture	46	238	35	3	146	47

Using boats									
Using powered boats									
3 ~ 5	5 ~ 10	10 ~ 20	20 ~ 30	30 ~ 50	50 ~ 100	100 ~ 200	200 ~ 500	500 ~ 1,000	
25,453	7,777	4,090	603	1,028	920	312	231	60	1
–	–	–	–	–	–	–	–	–	2
–	–	–	–	–	4	–	–	–	3
–	–	–	–	–	–	–	–	–	4
–	–	–	–	–	12	9	5	–	5
–	–	–	–	–	–	–	–	–	6
–	–	–	–	–	–	–	2	–	7
1	1	1	–	1	–	–	–	–	8
–	–	–	–	–	–	–	10	5	9
–	–	–	–	–	–	–	1	–	10
–	–	20	25	84	98	24	6	–	11
–	–	1	2	1	6	6	1	–	12
6,133	1,813	767	31	8	13	2	–	–	13
353	84	22	1	1	–	–	–	–	14
71	52	94	44	55	34	8	12	2	15
14	12	34	29	27	43	4	13	4	16
311	127	69	9	12	7	1	–	–	17
27	82	46	1	18	9	2	2	–	18
433	184	76	26	12	–	–	–	–	19
89	213	60	14	48	88	29	15	–	20
3,492	994	327	43	28	44	5	7	1	21
736	110	107	15	55	86	42	32	10	22
139	27	16	2	11	4	2	–	–	23
3,216	1,301	1,108	84	241	332	114	38	4	24
4,538	819	202	9	16	7	1	–	1	25
32	45	161	9	73	74	47	79	32	26
72	161	134	65	45	15	6	2	–	27
6	5	9	5	3	2	–	–	–	28
1,459	413	169	32	138	6	1	–	–	29
–	–	–	–	–	–	–	–	–	30
94	76	54	70	82	8	–	–	–	31
1,008	322	319	57	30	–	–	–	–	32
–	–	–		–	–	–	–	–	33
–	–	–	–		–	–	–	–	34
696	117	24	2	1	3	2	2	1	35
928	300	36	3	3	–	–	–	–	36
1,601	519	232	24	35	25	7	4	–	37
–	–	–	–	–	–	–	–	–	38
–	–	–		–	–		–	–	39
–	–	–	–	–	–	–	–	–	40
	–		–	–	–	–	–	–	41
–	–		–		–		–	–	42
–	–	–	–	–	–		–	–	43
–	–	–	–	–		–	–		44
–	–	–	–	–		–	–	–	45
4	–	2	1	–	–	–	–	–	46

a. Number of management units by main type of fisheries (concluded)

		1,000 gross tons and over	Large set net	Small set net	Beach seine
Total	1	8	266	5,045	536
Factory ship type					
Whaling	2	–	–	–	–
Trawls	3	–	–	–	–
Tuna long line	4	–	–	–	–
Salmon fishing	5	–	–	–	–
Crab fishing	6	–	–	–	–
North Pacific Ocean long line and gill net	7	–	–	–	–
Costal whaling	8	–	–	–	–
Trowls					
Distant water trawl	9	–	–	–	–
Trawl, west of 128° 30′ E	10	–	–	–	–
Off shore trawls					
One boat operation	11	–	–	–	–
Two boats operation	12	–	–	–	–
Small trawl	13	–	–	–	–
Other trawls	14	–	–	–	–
Purse seines					
mmm					
One boat operation	15	–	–	–	–
Two boats operation	16	–	–	–	–
Other surrounding nets	17	–	–	–	–
Lift nets					
Saury stick-held dipnet	18	–	–	–	–
Other lift nets	19	–	–	–	–
Gill nets					
Salmon drift gill net	20	–	–	–	–
Other gill nets	21	–	–	–	–
Pole-and-line, angling					
Skipjack pole-and-line	22	3	–	–	–
Mackerel pole-and-line	23	–	–	–	–
Squid angling	24	1	–	–	–
Other anglings	25	–	–	–	–
Long line					
Tuna long line	26	4	–	–	–
Salmon long line	27	–	–	–	–
Alaska pollack long line	28	–	–	–	–
Other long lines	29	–	–	–	–
Beach seine	30	–	–	–	536
Boat seine of drawerst type	31	–	–	–	–
Boat seine	32	–	–	–	–
Large set net	33	–	266	–	–
Small set net	34	–	–	5,045	–
Shellfish collecting	35	–	–	–	–
Seaweed collecting	36	–	–	–	–
Other capturing fisheries	37	–	–	–	–
Culture in marine water					
"Nori" laver culture	38	–	–	–	–
Oyster culture	39	–	–	–	–
Pearl culture	40	–	–	–	–
Pearl oyster culture	41	–	–	–	–
"Wakame" seaweed culture	42	–	–	–	–
Young yellowtail culture	43	–	–	–	–
Common scallop culture	44	–	–	–	–
Other cultures	45	–	–	–	–
Inland water fisheries and culture	46	–	–	–	–

Culture in marin water									
"Nori" laver		Oyster	Pearl	Pearl oyster	"Wakame" seaweed	Young yellowtail	Common scallop	Others	
Without boats	Using boats								
1,253	36,399	3,220	1,695	1,449	9,350	2,513	2,829	921	1
–	–	–	–	–	–	–	–	–	2
–	–	–	–	–	–	–	–	–	3
–	–	–	–	–	–	–	–	–	4
–	–	–	–	–	–	–	–	–	5
–	–	–	–	–	–	–	–	–	6
–	–	–	–	–	–	–	–	–	7
–	–	–	–	–	–	–	–	–	8
–	–	–	–	–	–	–	–	–	9
–	–	–	–	–	–	–	–	–	10
–	–	–	–	–	–	–	–	–	11
–	–	–	–	–	–	–	–	–	12
–	–	–	–	–	–	–	–	–	13
–	–	–	–	–	–	–	–	–	14
–	–	–	–	–	–	–	–	–	15
–	–	–	–	–	–	–	–	–	16
–	–	–	–	–	–	–	–	–	17
–	–	–	–	–	–	–	–	–	18
–	–	–	–	–	–	–	–	–	19
–	–	–	–	–	–	–	–	–	20
–	–	–	–	–	–	–	–	–	21
–	–	–	–	–	–	–	–	–	22
–	–	–	–	–	–	–	–	–	23
–	–	–	–	–	–	–	–	–	24
–	–	–	–	–	–	–	–	–	25
–	–	–	–	–	–	–	–	–	26
–	–	–	–	–	–	–	–	–	27
–	–	–	–	–	–	–	–	–	28
–	–	–	–	–	–	–	–	–	29
–	–	–	–	–	–	–	–	–	30
–	–	–	–	–	–	–	–	–	31
–	–	–	–	–	–	–	–	–	32
–	–	–	–	–	–	–	–	–	33
–	–	–	–	–	–	–	–	–	34
–	–	–	–	–	–	–	–	–	35
–	–	–	–	–	–	–	–	–	36
–	–	–	–	–	–	–	–	–	37
1,253	36,399	–	–	–	–	–	–	–	38
–	–	3,220	–	–	–	–	–	–	39
–	–	–	1,695	–	–	–	–	–	40
–	–	–	–	1,449	–	–	–	–	41
–	–	–	–	–	9,350	–	–	–	42
–	–	–	–	–	–	2,513	–	–	43
–	–	–	–	–	–	–	2,829	–	44
–	–	–	–	–	–	–	–	921	45
–	–	–	–	–	–	–	–	–	46

b. Number of management units by number of workers on the sea in season

(a) Family workers

Type of fisheries		Total	Nobody	1 person	2 persons
Total	1	224,968	1,369	109,369	87,580
Without fishing boats	2	14,672	20	10,579	3,526
Using boats					
Non-powered boats only	3	7,728	11	5,495	1,780
Using powered boats					
less than 1 gross ton	4	45,807	78	29,937	12,781
1 ~ 3	5	50,803	69	29,399	17,505
3 ~ 5	6	25,453	47	11,939	10,251
5 ~ 10	7	7,777	73	2,951	3,093
10 ~ 20	8	4,090	129	1,743	1,379
20 ~ 30	9	603	31	250	181
30 ~ 50	10	1,028	136	442	274
50 ~ 100	11	920	284	379	165
100 ~ 200	12	312	137	114	40
200 ~ 500	13	231	143	62	15
500 ~ 1,000	14	60	47	8	2
1,000 gross tons and over	15	8	6	–	2
Large set net	16	266	50	115	61
Small set net	17	5,045	31	1,918	2,337
Beach seine	18	536	2	172	215
Culture in marine water					
"Nori" laver culture					
Without boats	19	1,253	1	454	690
Using boats	20	36,399	44	6,814	22,948
Oyster culture	21	3,220	6	1,124	1,539
Pearl culture	22	1,695	2	258	867
Pearl oyster culture	23	1,449	2	451	705
"Wakame" seaweed culture	24	9,350	3	3,025	4,197
Young yellowtail culture	25	2,513	10	782	1,174
Common scallop culture	26	2,829	6	711	1,437
Other cultures	27	921	1	247	416

d. Number of own fishery management units by full time or part time

Type of fisheries		Total	Full time	Part time	
				Mainly engaged in fisheries	Engaged in fisheries as a subsidiary job
Total	1	224,968	48,608	102,352	74,008
Without fishing boats	2	14,672	687	1,426	12,559
Using boats					
Non-powered boats only	3	7,728	620	1,096	6,012
Using powered boats					
less than 1 gross ton	4	45,807	5,423	14,570	25,814
1 ~ 3	5	50,803	12,741	25,900	12,162
3 ~ 5	6	25,453	9,387	13,436	2,630
5 ~ 10	7	7,777	3,103	4,142	532
10 ~ 20	8	4,090	1,881	2,075	134
20 ~ 30	9	603	269	321	13
30 ~ 50	10	1,028	509	490	29
50 ~ 100	11	920	495	412	13
100 ~ 200	12	312	189	120	3
200 ~ 500	13	231	149	74	8
500 ~ 1,000	14	60	46	14	–
1,000 tons and over	15	8	6	2	–
Large set net	16	266	113	133	20
Small set net	17	5,045	919	2,749	1,377
Beach seine	18	536	44	198	294
Culture in marine water					
"Nori" laver culture					
Without boats	19	1,253	54	164	1,035
Using boats	20	36,399	7,209	22,646	6,544
Oyster culture	21	3,220	924	1,549	747
Pearl culture	22	1,695	510	941	244
Pearl oyster culture	23	1,449	260	789	400
"Wakame" seaweed culture	24	9,350	861	5,572	2,917
Young yellowtail culture	25	2,513	1,122	1,276	115
Common scallop culture	26	2,829	879	1,705	245
Other cultures	27	921	208	552	161

(b) Employees

3 persons and over	Total	Nobody	1 persons	2 persons	3 ~ 4 persons	5 ~ 9 persons	
26,650	224,968	193,897	11,874	6,613	5,588	4,297	1
547	14,672	14,637	24	5	4	2	2
442	7,728	7,627	59	14	14	8	3
3,011	45,807	44,154	1,161	282	147	52	4
3,830	50,803	47,849	1,940	575	302	118	5
3,216	25,453	19,853	2,976	1,468	888	219	6
1,660	7,777	4,310	1,157	848	883	491	7
839	4,090	878	379	470	880	1,199	8
141	603	44	16	32	113	253	9
176	1,028	19	11	20	133	494	10
92	920	1	4	6	63	266	11
21	312	3	–	–	3	36	12
11	231	–	–	–	–	3	13
3	60	–	–	–	–	–	14
–	8	–	–	–	–	–	15
40	266	33	3	9	17	43	16
759	5,045	3,704	351	287	317	269	17
147	536	198	19	29	55	123	18
108	1,253	1,193	25	21	14	–	19
6,593	36,399	31,143	2,486	1,601	930	212	20
551	3,220	2,599	211	137	113	116	21
568	1,695	1,149	98	136	163	100	22
291	1,449	1,323	43	29	28	19	23
2,125	9,350	8,553	340	227	160	65	24
547	2,513	1,593	244	231	248	140	25
675	2,829	2,371	190	132	90	39	26
257	921	663	137	54	23	30	27

e. Number of part time management units by main type of part-time business

Total	Management units mainly engaged in fisheries							
	Sub total	Own businesses					Hired in	
		Agriculture	Fishery processing	Guide for sport fishing	Run a seasonal inn	Others	Fisheries	
176,360	102,352	34,927	1,828	3,058	1,381	8,791	12,690	1
13,985	1,426	448	5	2	77	129	160	2
7,108	1,096	386	9	4	9	129	143	3
40,384	14,570	3,412	131	343	230	1,340	2,210	4
38,062	25,900	6,491	304	1,388	383	2,326	3,471	5
16,066	13,436	3,275	263	575	220	1,228	1,922	6
4,674	4,142	1,054	183	182	64	358	632	7
2,209	2,075	608	148	52	24	232	200	8
334	321	83	46	1	4	39	30	9
519	490	115	64	1	2	65	32	10
425	412	86	20	2	10	71	20	11
123	120	31	6	–	1	29	9	12
82	74	23	5	1	–	15	5	13
14	14	3	1	–	–	2	–	14
2	2	–	–	1	–	1	–	15
153	133	36	6	3	4	33	15	16
4,126	2,749	999	51	55	71	283	321	17
492	198	92	5	3	4	23	21	18
1,199	164	86	7	–	–	14	13	19
29,190	22,646	12,882	377	240	157	1,485	964	20
2,296	1,549	561	11	19	10	130	270	21
1,185	941	540	13	5	14	93	27	22
1,189	789	527	11	2	2	49	115	23
8,489	5,572	1,870	100	110	62	339	1,509	24
1,391	1,276	382	38	17	22	188	191	25
1,950	1,705	815	19	49	8	129	262	26
713	552	125	5	3	3	61	148	27

c. Number of management units by composition of workers engaged in work on the sea

Type of fisheries		10 persons and over	Total	Family workers only
Total	1	2,699	224,968	193,897
Without fishing boats	2	–	14,672	14,637
Using boats				
Non-powered boats only	3	6	7,728	7,627
Using powered boats				
less than 1 ton	4	11	45,807	44,154
1 ~ 3	5	19	50,803	47,849
3 ~ 5	6	49	25,453	19,853
5 ~ 10	7	88	7,777	4,310
10 ~ 20	8	284	4,090	878
20 ~ 30	9	145	603	44
30 ~ 50	10	351	1,028	19
50 ~ 100	11	580	920	1
100 ~ 200	12	270	312	3
200 ~ 500	13	228	231	–
500 ~ 1,000	14	60	60	–
1,000 tons and over	15	8	8	–
Large set net	16	161	266	33
Small set net	17	117	5,045	3,704
Beach seine	18	112	536	198
Culture in marine water				
"Nori" laver culture				
Without boats	19	–	1,253	1,193
Using boats	20	27	36,399	31,143
Oyster culture	21	44	3,220	2,599
Pearl culture	22	49	1,695	1,149
Pearl oyster culture	23	7	1,449	1,323
"Wakame" seaweed culture	24	5	9,350	8,553
Young yellowtail culture	25	57	2,513	1,593
Common scallop culture	26	7	2,829	2,371
Other cultures	27	14	921	663

e. Number of part time management units by main type of part-time business (concluded)

Type of fisheries		Mainly engaged in fisheries		Management unit	
		Hired in		Total	
		Off fisheries business			
		Stably	Unstably		Agriculture
Total	1	21,190	18,487	74,008	18,678
Without fishing boats	2	222	383	12,559	4,250
Using boats					
Non-powered boats only	3	140	279	6,012	1,608
Using powered boats					
less than 1 ton	4	2,710	4,194	25,814	4,998
1 ~ 3	5	6,305	5,232	12,162	2,195
3 ~ 5	6	3,215	2,738	2,630	333
5 ~ 10	7	949	720	532	43
10 ~ 20	8	566	245	134	10
20 ~ 30	9	76	42	13	1
30 ~ 50	10	151	60	29	–
50 ~ 100	11	149	54	13	–
100 ~ 200	12	32	12	3	–
200 ~ 500	13	23	2	8	1
500 ~ 1,000	14	8	–	–	–
1,000 tons and over	15	–	–	–	–
Large set net	16	31	5	20	3
Small set net	17	538	431	1,377	343
Beach seine	18	36	14	294	124
Culture in marine water					
"Nori" laver culture					
Without boats	19	22	22	1,035	429
Using boats	20	4,109	2,432	6,544	3,098
Oyster culture	21	416	132	747	325
Pearl culture	22	147	102	244	27
Pearl oyster culture	23	38	45	400	183
"Wakame" seaweed culture	24	660	922	2,917	605
Young yellowtail culture	25	333	105	115	21
Common scallop culture	26	253	170	245	54
Other cultures	27	61	146	161	27

in season

Employees only	Family workers and employees				
	Sub total	Same number as family workers and employees	Number of family workers over than employees	Number of employees over than family workers	
1,315	29,756	8,902	7,106	13,748	1
2	33	24	1	8	2
8	93	50	12	31	3
64	1,589	902	377	310	4
60	2,894	1,453	648	793	5
45	5,555	2,161	1,398	1,996	6
73	3,394	884	770	1,740	7
128	3,084	346	389	2,349	8
31	528	37	28	463	9
136	873	24	29	820	10
284	635	16	6	613	11
136	173	–	–	173	12
143	88	–	–	88	13
47	13	–	–	13	14
6	2	–	–	2	15
50	183	4	8	171	16
30	1,311	290	247	774	17
2	336	32	18	286	18
–	60	23	19	18	19
43	5,213	1,671	2,110	1,432	20
6	615	159	151	305	21
2	544	117	146	281	22
1	125	28	34	63	23
3	794	273	225	296	24
10	910	198	234	478	25
4	454	134	149	171	26
1	257	76	107	74	27

engaged in fisheries as a subsidiary job

Fishery processing	Own businesses			Hired in			
	Guide for sport fishing	Run a seasonal inn	Others	Fisheries	Off fisheries business		
					Stably	Unstably	
610	639	798	9,788	12,425	18,813	12,257	1
26	6	119	1,537	937	3,674	2,010	2
33	6	23	716	753	1,524	1,349	3
166	108	284					
166	108	284	3,557	4,264	6,537	5,900	4
88	243	205	1,872	2,817	3,214	1,528	5
65	120	42	288	1,155	350	277	6
21	40	10	59	234	67	58	7
6	11	–	31	52	16	8	8
2	1	–	3	4	2	–	9
5	–	–	14	5	5	–	10
4	–	1	5	1	2	–	11
1	–	–	–	–	1	1	12
2	–	–	2	–	3	–	13
–	–	–	–	–	–	–	14
–	–	–	–	–	–	–	15
1	1	–	6	5	2	2	16
15	2	32	201	247	305	232	17
6	1	4	54	14	74	17	18
11	1	2	121	44	334	93	19
64	32	31	799	357	1,737	426	20
4	6	3	70	100	191	48	21
3	2	7	47	38	77	43	22
9	1	–	39	70	80	18	23
57	57	32	255	1,217	497	197	24
8	–	1	47	20	12	6	25
11	–	1	33	50	74	22	26
2	1	1	32	41	35	22	27

(3) Management units managed culture in marine water

a. "Nori" Laver culture

(a) Number of management units by combining with capture and culture

Size of area		Total	Laver culture only	Combining
				Other culture
Total	1	46,094	18,027	2,201
Less than 100 m²	2	592	110	55
100 ~ 300	3	2,148	772	210
300 ~ 500	4	2,178	594	302
500 ~ 1,000	5	6,715	2,749	503
1,000 ~ 2,000	6	12,614	5,163	435
2,000 ~ 3,000	7	9,094	3,318	282
3,000 ~ 5,000	8	7,524	2,840	247
5,000 ~ 10,000	9	4,323	2,161	139
10,000 m² and over	10	906	320	28

c. Pearl culture

(a) Number of management units by combining with capture and culture

Number of rafts		Total	Pearl culture only	Combining with pearl culture and		
				Other culture	Capture	Other culture and capture
Total	1	2,335	961	850	337	187
Less than 15 rafts	2	1,301	408	506	254	133
15 — 30	3	578	284	202	58	34
30 ~ 50	4	208	109	79	14	6
50 ~ 100	5	95	55	28	3	9
100 ~ 500	6	125	87	27	7	4
500 ~ 1,000	7	23	14	7	1	1
1,000 rafts and over	8	5	4	1	—	—

f. Young yellowtail culture

(a) Number of management units by combining with capture and culture

Size of area		Total	Young yellowtail culture only	Combining
				Other culture
Total	1	3,335	1,677	386
Less than 100 m²	2	448	185	56
100 ~ 300	3	1,363	741	101
300 ~ 500	4	652	297	98
500 ~ 1,000	5	464	219	59
1,000 ~ 2,000	6	179	98	31
2,000 ~ 3,000	7	64	40	7
3,000 ~ 5,000	8	55	31	13
5,000 ~ 10,000	9	57	35	10
10,000 m² and over	10	53	31	11

(b) Area of culture

with laver culture and		Area of culture	Area of culture per a management unit	
Capture	Other culture and capture			
		m^2	m^2	
22,072	3,794	188,697,839	4,093	1
238	189	34,306	57	2
622	544	427,066	198	3
665	617	875,198	401	4
2,585	878	5,067,106	754	5
6,323	693	18,535,426	1,469	6
5,110	384	22,460,466	2,469	7
4,219	218	28,921,229	3,843	8
1,848	175	28,052,962	6,489	9
462	96	84,324,080	93,072	10

d. Pearl oyster culture

(b) Number of rafts

(a) Number of management units by combining with capture and culture

Number of rafts	Number of rafts per a management unit	Total	Pearl oyster culture only	Combining with pearl oyster culture and			
				Other culture	Capture	Other culture and capture	
85,674	36	2,340	990	608	562	180	1
8,343	6	2,044	887	496	499	162	2
11,624	20	201	85	62	44	10	3
7,370	35	43	8	19	16	–	4
6,342	66	24	6	11	2	5	5
25,495	203	25	3	18	1	3	6
13,716	596	1	–	1	–	–	7
12,784	2,556	2	1	1	–	–	8

(b) Area of culture

with young yellowtail culture and		Area of culture	Area of culture per a management unit	
Capture	Other culture & capture			
		m^2	m^2	
1,073	199	5,199,864	1,559	1
170	37	27,082	60	2
441	80	228,119	167	3
224	33	247,588	379	4
168	18	313,768	676	5
41	9	244,156	1,364	6
14	3	148,192	2,315	7
8	3	203,260	3,695	8
4	8	377,463	6,622	9
3	8	3,410,236	63,344	10

b. Oyster culture

(a) Number of management units by combining with capture and culture

Size of area		Total	Oyster culture only	Combining
				Other culture
Total	1	5,479	1,133	1,415
Less than 100 m²	2	550	38	184
100 ~ 300	3	1,570	146	528
300 ~ 500	4	895	110	304
500 ~ 1,000	5	939	210	250
1,000 ~ 2,000	6	707	295	75
2,000 ~ 3,000	7	388	184	41
3,000 ~ 5,000	8	191	84	20
5,000 ~ 10,000	9	156	53	6
10,000 m² and over	10	83	13	7

e. "Wakame" Seaweed culture

(a) Number of management units by combining with capture and culture

Length of trunk rope		Total	Seaweed culture only	Combining with seaweed culture and		
				Other culture	Capture	Other culture and capture
Total	1	18,346	1,080	1,204	9,559	6,503
Less than 100 m	2	784	73	86	417	208
100 ~ 200	3	1,789	144	187	939	519
200 ~ 500	4	5,416	410	358	2,880	1,768
500 ~ 1,000	5	5,421	229	277	2,933	1,982
1,000 ~ 2,000	6	4,181	151	222	1,991	1,817
2,000 ~ 3,000	7	518	40	49	266	163
3,000 m and over	8	237	33	25	133	46

g. Common scallop culture

(a) Number of management units by combining with capture and culture

Number of cultivating common scallops		Total	Common scallop culture only	Combining
				Other culture
Total	1	7,222	907	704
Less than 10 thousand	2	2,762	39	344
10 ~ 30	3	1,067	33	93
30 ~ 50	4	522	27	50
50 ~ 100	5	744	118	62
100 ~ 150	6	549	144	31
150 ~ 200	7	412	144	28
200 ~ 300	8	522	179	29
300 and over	9	644	223	67

(b) Area of culture

with oyster culture and		Area of culture	Area of culture per a management unit	
Capture	Other culture & capture			
		m^2	m^2	
1,050	1,881	6,747,548	1,231	1
54	274	30,760	55	2
170	726	288,375	183	3
140	341	333,966	373	4
213	266	650,674	692	5
212	125	1,000,559	1,415	6
115	48	976,729	2,517	7
49	38	726,156	3,801	8
63	34	1,125,005	7,211	9
34	29	1,615,324	19,496	10

(b) Length of trunk rope

Length of trunk rope	Length of trunk rope per a management unit		
m	m		
13,511,958	736	1	
46,269	59	2	
231,430	129	3	
1,690,380	312	4	
3,753,119	692	5	
5,284,975	1,264	6	
1,150,209	2,220	7	
1,355,576	5,719	8	

(c) Length of main rope

Length of boss rope	Length of main rope per a management unit	
m	m	
26,058,186	1,420	1
245,399	313	2
1,139,520	636	3
4,790,824	884	4
7,402,234	1,365	5
9,453,212	2,260	6
1,421,976	2,745	7
1,605,021	6,772	8

(b) Number of cultivating common scallops

common scallop culture and		Number of cultivating common scallops	Number of cultivating common scallops per management unit	
Capture	Other culture and capture			
1,716	3,895	852,876	118	1
340	2,039	7,552	2	2
235	706	17,721	16	3
152	293	19,491	37	4
235	329	50,124	67	5
202	172	65,183	118	6
164	76	69,747	169	7
182	132	124,197	237	8
206	148	498,861	774	9

(4) Fishing boats

a. Number of fishing boats by size of boat and by size of operation

Size of operation		Total number of fishing boats	Number of non-powered boats	Number of boats with outboard engine	Number of powered boats				
					Sub total	less than 1 gross ton	1 ~ 3	3 ~ 5	5 ~ 10
Total	1	331,274	54,303	99,349	177,622	27,797	84,553	41,544	9,196
Without fishing boats	2	–	–	–	–	–	–	–	–
Using boats									
Non-powered boats only	3	7,573	7,573	–	–	–	–	–	–
Using powered boats									
less than 1 gross ton	4	53,896	4,031	34,165	15,700	15,700	–	–	–
1 ~ 3	5	65,679	5,040	8,161	52,478	1,747	50,731	–	–
3 ~ 5	6	35,601	2,469	4,992	28,140	846	3,631	23,663	–
5 ~ 10	7	14,623	1,069	1,869	11,685	486	2,745	3,492	4,962
10 ~ 20	8	8,218	643	793	6,782	186	855	1,421	1,063
20 ~ 30	9	2,135	147	162	1,826	32	252	474	482
30 ~ 50	10	2,902	182	135	2,585	32	165	504	395
50 ~ 100	11	3,527	182	172	3,173	19	121	438	407
100 ~ 200	12	1,637	68	37	1,532	14	29	62	92
200 ~ 500	13	1,697	55	30	1,612	3	13	14	24
500 ~ 1,000	14	1,111	31	8	1,072	2	7	15	19
1,000 gross tons and over	15	2,154	7	17	2,130	1	12	6	19
Large set net	16	3,408	1,287	308	1,812	39	365	470	473
Small set net	17	9,727	2,099	2,406	5,223	688	3,139	1,050	293
Beach seine	18	1,442	697	365	380	46	216	106	8
Culture in marine water									
"Nori" laver culture									
Without boats	19	–	–	–	–	–	–	–	–
Using boats	20	75,073	20,949	31,363	22,761	3,680	12,286	6,499	253
Oyster culture	21	6,285	1,460	1,767	3,058	472	1,715	507	195
Pearl culture	22	4,659	1,219	1,136	2,304	376	1,326	457	126
Pearl oyster culture	23	2,189	525	684	980	372	488	112	8
"Wakame" seaweed culture	24	14,696	2,255	7,290	5,151	2,069	2,717	291	55
Young yellowtail culture	25	6,754	1,436	984	4,334	531	2,039	1,303	259
Common scallop culture	26	4,526	533	1,520	2,473	380	1,441	588	48
Other cultures	27	1,762	346	985	431	76	260	72	15

Number of powered boats											
10 ~ 20	20 ~ 30	30 ~ 50	50 ~ 100	100 ~ 150	150 ~ 200	200 ~ 350	350 ~ 500	500 ~ 1,000	1,000 ~ 3,000	3,000 and over	
6,404	392	1,811	3,237	722	404	1,050	291	76	92	53	1
–	–	–	–	–	–	–	–	–	–	–	2
–	–	–	–	–	–	–	–	–	–	–	3
–	–	–	–	–	–	–	–	–	–	–	4
–	–	–	–	–	–	–	–	–	–	–	5
–	–	–	–	–	–	–	–	–	–	–	6
–	–	–	–	–	–	–	–	–	–	–	7
3,257	–	–	–	–	–	–	–	–	–	–	8
370	216	–	–	–	–	–	–	–	–	–	9
606	23	860	–	–	–	–	–	–	–	–	10
852	47	223	1,066	–	–	–	–	–	–	–	11
196	44	264	707	74	50	–	–	–	–	–	12
129	42	156	732	133	64	265	37	–	–	–	13
25	8	65	313	168	43	360	41	6	–	–	14
17	1	220	408	347	247	424	213	70	92	53	15
447	3	7	7	–	–	1	–	–	–	–	16
47	1	4	1	–	–	–	–	–	–	–	17
3	–	–	1	–	–	–	–	–	–	–	18
–	–	–	–	–	–	–	–	–	–	–	19
41	–	2	–	–	–	–	–	–	–	–	20
165	4	–	–	–	–	–	–	–	–	–	21
17	–	2	–	–	–	–	–	–	–	–	22
–	–	–	–	–	–	–	–	–	–	–	23
19	–	–	–	–	–	–	–	–	–	–	24
189	3	8	2	–	–	–	–	–	–	–	25
16	–	–	–	–	–	–	–	–	–	–	26
8	–	–	–	–	–	–	–	–	–	–	27

b. Number of powered boats, tonnage, horse-power c. Number of powered boats by

Bulk of tonnage		Total number	Total tonnage (gross ton)	Total horse-powers	Total number	Diesel
Total	1	177,622	203,866,494	7,824,069	177,622	172,931
less than 1 gross ton	2	27,797	2,033,687	133,986	27,797	25,043
1 ~ 3	3	84,553	16,299,670	1,037,878	84,553	83,279
3 ~ 5	4	41,544	16,718,361	1,146,315	41,544	41,058
5 ~ 10	5	9,196	7,024,007	404,036	9,196	9,115
10 ~ 15	6	3,620	4,659,532	244,467	3,620	3,587
15 ~ 20	7	2,784	5,115,878	386,638	2,784	2,740
20 ~ 30	8	392	1,089,583	61,299	392	383
30 ~ 40	9	949	3,462,495	185,162	949	945
40 ~ 50	10	862	4,010,927	216,623	862	861
50 ~ 60	11	773	4,482,188	253,605	773	773
60 ~ 70	12	439	2,912,695	164,706	439	438
70 ~ 80	13	241	1,851,490	87,385	241	241
80 ~ 90	14	434	3,701,485	152,725	434	433
90 ~ 100	15	1,350	13,118,605	624,381	1,350	1,347
100 ~ 150	16	722	8,805,307	449,164	722	722
150 ~ 200	17	404	7,567,530	253,840	404	404
200 ~ 350	18	1,050	30,560,297	983,629	1,050	1,050
300 ~ 500	19	291	12,112,995	387,880	291	291
500 ~ 1,000	20	76	5,538,024	168,460	76	76
1,000 ~ 3,000	21	92	18,338,592	225,230	92	92
3,000 gross tons and over	22	53	35,463,146	256,660	53	53

e. Number of powered boats of over than 5 tons by status of equipments and facilities

Bulk of tonnage		Total number	Equipment for navigation, etc.					
			Wireless telephone	Loran navigator system	Omega and Decca navigator system	Facsimile	Variable pitch propella	Trawl winch
Total	1	23,728	5,584	8,982	1,087	2,385	1,768	3,142
5 ~ 10 gross ton	2	9,196	807	1,044	71	20	152	611
10 ~ 15	3	3,620	400	791	37	6	65	519
15 ~ 20	4	2,784	469	894	48	7	66	144
20 ~ 30	5	392	96	228	19	3	17	67
30 ~ 40	6	949	201	630	25	15	42	123
40 ~ 50	7	862	237	677	46	45	52	123
50 ~ 60	8	773	273	665	114	151	67	264
60 ~ 70	9	439	189	376	43	165	42	34
70 ~ 80	10	241	91	182	25	70	20	35
80 ~ 90	11	434	95	308	30	36	33	50
90 ~ 100	12	1,350	584	1,064	169	339	327	278
100 ~ 150	13	722	397	530	157	174	214	418
150 ~ 200	14	404	263	316	32	131	86	97
200 ~ 350	15	1,050	996	842	165	817	473	210
350 ~ 500	16	291	275	251	76	210	82	40
500 ~ 1,000	17	76	76	54	4	60	13	31
1,000 3,000	18	92	91	87	20	92	13	66
3,000 gross tons and over	19	53	44	43	6	44	4	32

type of main engine

d. Number of powered boats by type of equipment for transportation, etc.

Hot bulb	Electric ignition	Total number	Remort control equipment for engine	Wireless telephone		Fish finder	
				Handy type	Fixed type		
1,075	3,616	177,622	42,299	33,016	33,945	41,873	1
181	2,573	27,797	3,385	2,137	196	572	2
423	851	84,553	14,451	16,516	6,737	11,192	3
319	167	41,544	11,503	10,187	11,274	13,107	4
70	11	9,196	4,058	2,012	4,896	5,133	5
29	4	3,620	1,973	834	2,226	2,364	6
38	6	2,784	1,636	527	1,976	2,015	7
9	–	392	230	48	316	335	8
3	1	949	519	76	825	815	9
1	–	862	486	62	775	779	10
–	–	773	553	65	701	732	11
–	1	439	316	29	358	415	12
–	–	241	116	10	190	222	13
1	–	434	139	25	403	407	14
1	2	1,350	801	85	1,172	1,270	15
–	–	722	555	100	627	650	16
–	–	404	320	35	319	383	17
–	–	1,050	895	170	580	1,014	18
–	–	291	233	61	162	279	19
–	–	76	42	13	71	62	20
–	–	92	55	10	91	83	21
–	–	53	33	14	50	44	22

Equipment for fishing									Rapid refrigerating facility	Fresh fish storage facility	
Rope reel Auto reel	Rope winder	Net holder	Power block	Buoy roller	Side roller	Line holer	Net handle facility	Auto angler			
2,180	1,690	4,498	625	1,256	4,600	3,552	2,365	5,530	2,641	3,629	1
322	341	1,657	54	389	1,295	638	486	1,718	2	291	2
350	300	750	128	212	623	211	350	701	5	117	3
113	130	568	31	173	549	396	353	799	14	206	4
35	43	51	16	14	67	74	34	172	1	32	5
68	81	136	29	48	134	198	100	260	7	139	6
67	90	156	18	43	168	227	110	350	31	296	7
103	181	153	17	63	222	161	156	232	55	316	8
35	35	187	35	38	220	248	177	98	106	236	9
21	30	60	15	12	77	94	50	82	75	82	10
31	17	59	10	21	80	43	36	253	40	105	11
171	105	422	104	84	353	296	327	552	588	530	12
324	67	116	101	62	225	65	101	25	163	386	13
64	49	17	13	31	75	101	7	54	170	233	14
362	177	132	47	50	415	623	70	176	959	465	15
93	39	32	6	15	92	167	5	54	256	115	16
12	3	1	1	1	5	7	1	3	41	14	17
7	2	1	–	–	–	3	2	1	75	34	18
2	–	–	–	–	–	–	–	–	53	32	19

(5) Hired fishery worker's households

a. Number of households by type of fisheries mainly engaged in

Full time or Part time		Total	Factory ship type					North Pacific Ocean long line & gill net	Costal whaling	Trawls		
			Whaling	Trawl	Tuna long line	Salmon fishing	Crab fishing			Distant water trawl	Trawl West of 128°30'E	Off shore: One boat operation
Total	1	126,777	1,601	1,209	530	2,679	686	810	159	5,555	2,894	4,675
Hired in fisheries only	2	47,583	807	511	246	1,080	170	460	110	3,213	1,907	2,456
Mainly hired in fisheries	3	58,772	734	588	219	1,338	443	302	37	2,029	879	2,034
Hired in fisheries subsidiary	4	20,422	60	110	65	261	73	48	12	313	108	185

a. Number of households by type of fisheries mainly engaged in (concluded)

Full time or Part time		Angling	Long lines				Beach seine	Boat seine of drawers type	Boat seine	Large set net	Small set net	Shell fish collecting
		Other anglings	Tuna long line	Salmon long line	Alaska pollack long line	Other long lines						
Total	1	2,026	12,553	938	307	2,359	3,053	1,882	3,166	7,606	3,891	441
Hired in fisheries only	2	836	6,741	393	194	1,190	92	469	673	1,536	763	92
Mainly hired in fisheries	3	854	4,843	457	101	1,022	182	1,011	1,404	4,565	1,833	160
Hired in fisheries subsidiary	4	336	969	88	12	147	2,779	402	1,089	1,505	1,295	189

Trawls			Surrounding nets			Lift nets		Gill nets		Angling			
trawls			Purse seine		Other sur-rounding nets	Saury stick-held dipnet	Other lift nets	Salmon drift gill net	Other gill nets	Skipjack pole-and-line	Mack-erel angling	Squid angling	
Two boat operation	Small trawl	Other trawls	One boat operation	Two boats operation									
1,278	4,617	473	10,177	6,235	2,071	1,664	1,204	3,401	3,338	10,690	1,077	10,531	1
548	1,679	196	4,071	1,948	397	798	281	1,499	1,019	3,937	299	3,275	2
690	2,425	229	5,036	3,483	1,096	761	457	1,715	1,406	5,853	598	5,807	3
40	513	48	1,070	804	578	105	466	187	913	900	180	1,449	4

Seaweeds collecting	Other capturing fisheries	Culture in marin water										
		"Nori" laver culture	Oyster culture	pearl culture	Pearl oyster culture	"Wakame" seaweed culture	Young yellow-tail culture	Common scallop culture	Other cultures	Inland water culture & caputre	Others	
203	2,739	1,569	278	2,193	342	297	2,294	243	359	18	466	1
34	1,053	456	135	649	75	15	969	94	77	3	136	2
65	1,300	499	78	652	100	33	1,103	68	119	12	153	3
104	386	614	65	892	167	249	222	81	163	3	177	4

b. Number of households by full time or part time works on the member of economical core in household

Full time or part time		Total	The economical core member in household does not engaged in fishery	Engaged in fishery			
				Subtotal	Fishery only	Mainly engaged in fishery	Engaged fishery as a subsidiary job
Total	1	126,777	8,902	117,875	89,142	19,238	9,495
Hired in fisheries only	2	47,583	116	47,467	47,467	–	–
Mainly hired in fisheries	3	58,772	1,564	57,208	39,744	17,054	410
Hired in fisheries subsidiary	4	20,422	7,222	13,200	1,931	2,184	9,085

(6) Fishery workers

a. Number of fishery workers by size of operation

Own or hired		Total	Without fishing boats	Using boats		
				Non-powered boats only	Using powered boats	
					Less than 1 gross ton	1~3
Total	1	510,727	18,726	10,152	63,357	76,779
Own only	2	325,349	16,866	8,419	52,230	66,811
Own and hired						
Mainly own	3	15,165	424	382	2,996	3,999
Mainly hired	4	20,394	571	928	5,544	3,572
Hired only	5	149,819	865	423	2,587	2,397

a. Number of fishery workers by size of operation (concluded)

Own or hired		Using boats		Large set net	Small set net	Beach seine
		Using powered boats				
		500~1,000	1,000 gross tons and over			
Total	1	21	2	374	8,884	1,008
Own only	2	21	2	344	7,810	925
Own and hired						
Mainly own	3	–	–	12	562	38
Mainly hired	4	–	–	14	374	28
Hired only	5	–	–	4	138	17

c. Number of households by main part-time businesses

Total	Hired in off-fisheries business			Own businesses							
	Subtotal	Stably	Unstably	Subtotal	Fishery	Agri-culture	Fishery processing business	Guide for sport fishing	Run a seasonal inn	Others	
79,194	50,974	27,807	23,167	28,220	2,179	16,200	767	102	733	8,239	1
–	–	–	–	–	–	–	–	–	–	–	2
58,772	39,801	20,611	19,190	18,971	2,111	9,944	576	79	565	5,696	3
20,422	11,173	7,196	3,977	9,249	68	6,256	191	23	168	2,542	4

Using boats								
Using powered boats								
3~5	5~10	10~20	20~30	30~5-	50~100	100~200	200~500	
42,916	14,603	7,284	1,127	1,628	1,034	265	133	1
38,082	13,154	6,893	1,066	1,579	1,002	254	129	2
2,058	730	191	35	13	9	2	–	3
1,869	488	106	17	11	4	1	–	4
907	231	94	9	25	19	8	4	5

Culture in Marine water									
"Nori" laver culture		Oyster culture	Pearl culture	Pearl oyster culture	"Wakame" seaweed culture	Young yellowtail culture	Common scallop culture	Other cultures	
Without fishing boats	Using boats								
2,016	72,462	6,082	3,903	2,821	18,736	4,938	5,670	1,843	1
1,934	70,170	5,520	3,802	2,541	14,386	4,597	5,226	1,586	2
29	1,498	157	33	102	1,179	210	320	127	3
42	445	105	49	139	1,596	71	78	70	4
11	349	300	19	39	1,575	60	46	60	5

b. Number of fishery workers by type of fishery mainly engaged in

Type of fisheries		Total	Total number of fishery workers engaged in own fisheries	Male				
				Sub total	15~19 years old	20~24	25~29	30~34
Total	1	510,727	340,514	256,981	7,384	15,607	14,935	17,873
Factory ship type								
Whaling	2	1,858	1	1	–	–	1	–
Trawls	3	1,697	–	–	–	–	–	–
Tuna long line	4	725	–	–	–	–	–	–
Salmon fishing	5	3,684	9	9	–	1	2	–
Crab fishing	6	1,020	–	–	–	–	–	–
North Pacific Ocean long line and gill net	7	1,081	–	–	–	–	–	–
Coastal whaling	8	218	4	4	1	–	–	–
Trawls								
Distant water trawl	9	7,294	2	2	–	–	–	–
Trawl, west of 128°30′E	10	3,292	2	1	–	–	–	–
Off shore trawls								
One boat operation	11	5,870	283	275	12	29	22	22
Two boats operation	12	1,637	26	22	–	1	1	1
Small trawl	13	25,021	19,364	15,680	533	1,181	1,186	1,372
Other trawls	14	2,046	1,468	1,266	39	84	76	93
Surrounding nets.								
Purse seine								
One boat operation	15	13,621	667	613	40	81	63	53
Two boats operation	16	8,222	354	320	12	43	36	32
Other surrounding nets	17	3,807	1,205	1,096	36	106	86	91
Lift nets								
Saury stick-held dipnet	18	2,304	233	229	20	38	22	12
Other lift nets	19	3,597	2,078	1,870	80	153	115	114
Gill nets								
Salmon drift gill net	20	5,253	553	543	35	97	64	51
Other gill nets	21	41,172	36,308	28,902	805	1,545	1,394	1,735
Pole-and-line, anglings								
Skipjack pole-and-line	22	16,754	2,174	2,138	65	156	156	184
Mackerel pole-and-line	23	1,920	686	676	20	50	49	38
Squid angling	24	32,446	17,044	16,718	808	1,414	1,071	1,172
Other anglings	25	43,803	41,354	38,409	563	1,058	1,181	1,862
Long lines								
Tuna long line	26	17,245	589	581	35	91	64	46
Salmon long line	27	1,834	613	607	36	79	77	52
Alaska pollack long line	28	418	53	51	2	8	6	3
Other long lines	29	12,805	9,689	8,090	319	609	534	485
Beach seine	30	5,216	1,019	712	14	35	38	34
Boat seine of drawers type	31	3,214	792	742	34	116	74	57
Boat seine	32	8,650	4,233	3,504	208	383	302	300
Large set net	33	11,471	318	287	18	21	33	14
Small set net	34	13,917	8,439	6,709	194	407	348	374
Shellfish collecting	35	24,598	24,006	14,279	308	725	807	1,174
Seaweed collecting	36	32,006	31,715	21,296	888	1,215	948	1,262
Other capturing fisheries	37	24,953	21,223	17,660	483	883	872	1,245
Culture in marine water								
"Nori" laver culture	38	77,584	74,031	45,815	949	3,150	3,492	3,890
Oyster culture	39	5,918	5,537	3,956	100	236	282	290
Pearl culture	40	6,999	3,863	2,122	28	114	177	203
Pearl oyster culture	41	3,229	2,688	1,610	25	92	94	99
"Wakame" seaweed culture	42	15,696	15,330	11,183	287	550	578	755
Young yellowtail culture	43	7,697	4,740	3,420	134	347	290	304
Common scallop culture	44	6,316	5,961	4,158	189	391	306	346
Other cultures	45	2,131	1,632	1,264	61	115	73	96
Inland water fisheries and culture	46	248	221	158	3	3	15	11
Others	47	240	7	3	–	–	–	1

Male							Female						
35~39	40~44	45~49	50~54	55~59	60~64	65 years old and over	Sub total	15~19	20~24	25~29	30~34	35~39	
29,690	38,492	34,840	23,790	22,040	20,791	31,539	83,533	555	2,554	4,860	9,619	14,414	1
–	–	–	–	–	–	–	–	–	–	–	–	–	2
–	–	–	–	–	–	–	–	–	–	–	–	–	3
–	–	–	–	–	–	–	–	–	–	–	–	–	4
–	2	–	2	–	1	1	–	–	–	–	–	–	5
–	–	–	–	–	–	–	–	–	–	–	–	–	6
–	–	–	–	–	–	–	–	–	–	–	–	–	7
–	2	1	–	–	–	–	–	–	–	–	–	–	8
–	1	–	1	–	–	–	–	–	–	–	–	–	9
–	–	1	–	–	–	–	1	–	–	–	–	–	10
38	46	41	26	17	12	10	8	–	–	–	2	3	11
1	4	7	2	1	–	4	4	–	–	–	–	1	12
2,363	2,907	2,244	1,292	962	764	876	3,684	11	69	217	570	815	13
169	219	192	123	86	71	114	202	–	2	11	25	48	14
74	85	82	46	30	26	33	54	1	2	5	7	13	15
33	46	33	26	22	11	26	34	1	4	4	3	7	16
116	208	142	85	79	44	103	109	–	4	4	12	29	17
20	32	36	21	10	11	7	4	–	–	–	–	3	18
252	267	229	184	149	127	200	208	1	5	10	21	44	19
62	69	66	48	19	12	20	10	–	1	1	4	–	20
3,116	4,119	3,907	2,554	2,647	2,742	4,338	7,406	27	128	314	803	1,297	21
262	365	311	205	156	127	151	36	1	1	–	2	6	22
75	94	100	68	59	56	67	10	–	–	1	–	–	23
1,912	2,629	2,286	1,457	1,306	1,136	1,527	326	9	9	13	35	65	24
3,807	5,288	4,755	3,611	3,882	4,301	8,101	2,945	14	53	106	238	389	25
75	99	82	40	21	11	17	8	1	–	2	1	–	26
63	89	71	47	35	28	30	6	–	–	2	1	–	27
–	9	7	4	6	3	3	2	–	–	–	–	1	28
895	1,223	1,041	701	681	668	934	1,599	6	39	86	167	301	29
63	77	95	62	70	65	159	307	1	9	11	30	31	30
82	114	86	65	33	33	48	50	1	12	7	4	7	31
419	529	456	278	215	183	231	729	8	30	52	98	172	32
20	28	49	21	27	19	37	31	1	3	2	3	4	33
628	899	900	649	564	637	1,109	1,730	9	31	53	149	303	34
1,829	2,258	1,899	1,284	1,185	1,068	1,742	9,727	73	271	495	908	1,409	35
2,053	2,666	2,676	2,104	2,070	2,061	3,353	10,419	116	313	473	888	1,435	36
2,105	2,695	2,444	1,711	1,608	1,427	2,187	3,563	21	92	168	337	581	37
5,890	7,441	6,678	4,324	3,608	2,968	3,425	28,216	145	968	2,000	3,757	5,241	38
405	553	593	434	377	320	366	1,581	8	64	90	165	268	39
321	325	309	195	169	125	156	1,741	26	122	165	230	297	40
163	223	227	187	171	128	201	1,078	5	27	62	91	147	41
1,299	1,571	1,549	1,166	1,057	1,030	1,341	4,147	33	138	265	562	790	42
418	512	484	290	257	173	211	1,320	12	50	78	176	263	43
519	602	551	363	318	293	280	1,803	21	84	136	270	375	44
125	168	170	104	126	105	121	368	3	20	25	48	59	45
18	28	39	10	17	4	10	63	–	3	2	12	9	46
–	–	1	–	–	1	–	4	–	–	–	–	1	47

b. Number of fishery workers by type of fishery mainly engaged in (continued)

Type of fisheries		Female						Total number of hired fishery workers
		40~44	45~49	50~54	55~59	60~64	65 years old and over	
Total	1	15,460	13,036	9,125	6,112	4,125	3,677	170,213
Factory ship type								
Whaling	2	–	–	–	–	–	–	1,857
Trawls	3	–	–	–	–	–	–	1,697
Tuna long line	4	–	–	–	–	–	–	725
Salmon fishing	5	–	–	–	–	–	–	3,675
Crab fishing	6	–	–	–	–	–	–	1,020
North Pacific Ocean long line and gill net	7	–	–	–	–	–	–	1,081
Coastal whaling	8	–	–	–	–	–	–	214
Trawls	9							
Distant water trawl	9	–	–	–	–	–	–	7,292
Trawl, west of 128°30'E	10	1	–	–	–	–	–	3,290
Off shore trawls								
One boat operation	11	–	2	1	–	–	–	5,587
Two boats operation	12	–	2	1	–	–	–	1,611
Small trawl	13	792	599	334	147	77	53	5,657
Other trawls	14	33	31	23	14	6	9	578
Surrounding nets								
Purse seines								
One boat operation	15	12	9	2	2	–	1	12,954
Two boats operation	16	6	1	5	1	–	2	7,868
Other surrounding nets	17	27	18	6	1	5	3	2,602
Lift nets								
Saury stick-held dipnet	18	–	1	–	–	–	–	2,071
Other lift nets	19	36	39	30	7	11	4	1,519
Gill nets								
Salmon drift gill net	20	2	2	–	–	–	–	4,700
Other gill nets	21	1,431	1,168	888	626	417	307	4,864
Pole-and-line, anglings								
Skipjack pole-and-line	22	9	7	4	3	1	2	14,580
Mackerel pole-and-line	23	5	3	–	1	–	–	1,234
Squid angling	24	59	50	30	22	21	13	15,402
Other anglings	25	507	408	354	336	264	276	2,449
Long lines								
Tuna long line	26	1	–	1	1	1	–	16,656
Salmon long line	27	2	–	–	–	1	–	1,221
Alaska pollack long line	28	1	–	–	–	–	–	365
Other long lines	29	297	249	192	122	77	63	3,116
Beach seine	30	48	54	28	32	31	32	4,197
Boat seine of drawers type	31	5	5	4	2	2	1	2,422
Boat seine	32	152	96	66	31	13	11	4,417
Large set net	33	4	6	5	2	1	–	11,153
Small set net	34	339	313	210	150	104	69	5,478
Shellfish collecting	35	1,665	1,498	1,183	875	623	727	592
Seaweed collecting	36	1,653	1,543	1,294	1,014	820	870	291
Other capturing fisheries	37	648	546	416	298	254	202	3,730
Culture in marine water								
"Nori" laver culture	38	5,444	4,471	2,842	1,675	956	717	3, 3,553
Oyster culture	39	324	288	171	93	57	53	381
Pearl culture	40	266	234	164	100	74	63	3,136
Pearl oyster culture	41	164	180	132	111	81	78	541
"Wakame" seaweed culture	42	816	651	401	278	144	69	366
Young yellowtail culture	43	272	219	141	63	31	15	2,957
Common scallop culture	44	352	275	147	83	36	24	355
Other cultures	45	75	50	41	20	15	12	499
Inland water fisheries and culture	46	12	13	8	2	1	1	27
Others	47	–	1	1	–	1	–	233

Male												
Sub total	15~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54	55~59	60~64	65 years old and over	
163,528	6,569	14,848	15,148	19,561	25,945	26,404	19,576	11,526	9,239	7,261	7,451	1
1,853	48	108	131	311	443	360	275	128	40	8	1	2
1,691	167	318	247	237	270	237	132	58	19	4	2	3
724	45	150	142	101	95	94	60	23	9	4	1	4
3,662	205	523	485	597	727	597	344	121	50	5	8	5
1,019	75	158	132	141	188	173	95	46	6	3	2	6
1,079	51	159	155	173	205	163	99	45	21	4	4	7
213	17	29	20	27	34	29	29	19	3	6	–	8
7,273	470	1,246	1,134	1,199	1,241	998	624	257	78	17	9	9
3,283	147	284	326	450	661	697	398	187	93	25	15	10
5,570	191	499	535	773	1,030	1,127	751	351	189	88	36	11
1,604	45	141	188	230	309	293	194	114	58	21	11	12
5,616	152	323	379	673	1,003	1,075	761	447	369	254	180	13
573	13	43	42	83	113	83	74	47	27	23	25	14
12,792	602	999	980	1,354	1,992	2,299	1,770	1,079	792	513	412	15
7,782	131	376	421	628	1,150	1,388	1,199	780	678	556	475	16
2,565	72	153	166	231	368	419	356	237	206	191	166	17
2,058	59	182	243	293	387	407	241	116	68	46	16	18
1,484	25	63	73	132	166	222	181	143	139	159	181	19
4,683	266	578	581	716	958	777	437	200	104	31	35	20
4,734	162	314	317	578	781	865	577	335	285	236	284	21
14,539	1,003	1,779	1,415	1,505	1,928	2,011	1,644	1,095	929	727	503	22
1,231	9	33	64	112	167	208	175	137	146	93	87	23
15,351	726	1,265	1,339	1,903	2,713	2,729	1,909	1,048	817	494	408	24
2,425	77	130	144	270	396	391	312	191	159	152	203	25
16,611	859	2,786	2,871	2,895	2,912	2,232	1,237	509	201	74	35	26
1,218	44	93	118	155	258	231	153	73	52	25	16	27
363	10	16	26	55	89	74	43	22	18	5	5	28
3,098	165	349	326	486	553	469	318	185	107	77	63	29
3,104	4	39	67	141	251	393	446	324	306	378	755	30
2,326	37	94	110	230	355	403	322	177	177	199	222	31
4,030	135	220	211	394	521	614	467	304	343	336	485	32
11,017	179	421	472	629	1,145	1,623	1,578	1,223	1,302	1,245	1,200	33
5,290	83	165	199	321	502	645	686	511	647	639	892	34
524	11	28	34	43	71	96	65	47	42	33	54	35
222	2	9	17	32	27	47	31	12	11	13	21	36
3,626	104	248	353	422	606	623	505	248	200	149	168	37
2,993	70	180	233	341	439	511	395	230	199	172	223	38
263	1	15	28	55	55	32	21	14	14	15	13	39
1,148	14	73	115	195	255	173	125	86	44	39	29	40
170	6	5	19	20	26	18	21	13	22	7	13	41
318	–	8	18	19	46	48	49	31	36	24	39	42
2,621	64	184	195	318	403	419	363	246	186	129	114	43
277	7	12	22	39	42	38	37	24	14	21	21	44
252	2	20	25	25	31	44	43	20	18	13	11	45
27	–	2	4	2	1	6	2	2	3	2	3	46
226	14	28	26	27	32	23	32	21	12	6	5	47

b. Number of fishery workers by type of fishery mainly engaged in (concluded)

Type of fisheries		Female			
		Sub total	15~19	20~24	25~29
Total	1	6,685	73	237	329
Factory ship type					
Whaling	2	4	1	–	–
Trawls	3	6	1	1	1
Tuna long line	4	1	–	1	–
Salmon fishing	5	13	–	1	3
Crab fishing	6	1	–	–	–
North Pacific Ocean long line and gill net	7	2	–	–	1
Coastal whaling	8	1	–	–	–
Trawls					
Distant water trawl	9	19	3	7	5
Trawl, west of 128°30'E	10	7	–	–	3
Off shore trawls					
One boat operation	11	17	2	2	4
Two boats operation	12	7	1	2	1
Small trawl	13	41	–	2	1
Other trawls	14	5	–	–	1
Surrounding nets					
Purse seines					
One boat operation	15	162	5	7	8
Two boats operation	16	86	1	1	2
Other surrounding nets	17	37	2	5	3
Lift nets					
Saury stick-held dipnet	18	13	1	1	1
Other lift nets	19	35	–	1	–
Gill nets					
Salmon drift gill net	20	17	–	2	1
Other gill nets	21	130	2	6	5
Pole-and-line, anlings					
Skipjack pole-and-line	22	41	2	12	1
Mackerel pole-and-line	23	3	–	–	–
Squid angling	24	51	1	4	3
Other anglings	25	24	1	1	1
Long lines					
Tuna long line	26	45	9	8	4
Salmon long line	27	3	–	–	–
Alaska pollack long line	28	2	–	–	–
Other long lines	29	18	1	1	2
Beach seine	30	1,093	1	20	38
Boat seine of drawers type	31	96	–	8	8
Boat seine	32	387	3	7	18
Large set net	33	136	4	2	1
Small set net	34	188	4	3	5
Shellfish collecting	35	68	–	3	1
Seaweed collecting	36	69	–	6	8
Other capturing fisheries	37	104	–	6	4
Culture in marine water					
"Nori" laver culture	38	560	–	23	36
Oyster culture	39	118	2	2	7
Pearl culture	40	1,988	18	77	109
Pearl oyster culture	41	371	2	3	14
"Wakame" seaweed culture	42	48	–	1	4
Young yellowtail culture	43	336	2	6	16
Common scallop culture	44	78	1	3	4
Other cultures	45	247	3	2	5
Inland water fisheries and culture	46	–	–	–	–
Others	47	7	–	–	–

Female								
30~34	35~39	40~44	45~49	50~54	55~59	60~64	65 years old and over	
611	917	1,117	1,092	866	638	441	364	1
1	–	1	–	–	–	1	–	2
3	–	–	–	–	–	–	–	3
–	–	–	–	–	–	–	–	4
2	1	–	5	1	–	–	–	5
–	–	–	–	1	–	–	–	6
–	1	–	–	–	–	–	–	7
–	–	–	1	–	–	–	–	8
1	1	–	1	1	–	–	–	9
–	–	–	2	–	–	1	1	10
3	3	1	2	–	–	–	–	11
–	–	2	–	1	–	–	–	12
6	8	4	6	3	5	2	4	13
1	–	2	1	–	–	–	–	14
10	36	39	24	18	7	3	5	15
13	21	19	17	8	1	3	–	16
6	3	3	8	4	1	1	1	17
2	1	2	1	1	1	1	1	18
4	4	9	7	3	3	2	2	19
3	4	2	1	1	1	–	2	20
14	19	22	19	16	7	9	11	21
2	1	4	4	7	3	3	2	22
–	–	1	–	1	–	–	1	23
2	7	6	7	5	5	5	6	24
2	1	3	3	3	4	3	2	25
3	3	2	4	3	3	4	2	26
1	–	–	–	–	–	–	2	27
–	–	1	–	1	–	–	–	28
2	4	2	1	1	1	–	3	29
99	110	149	160	135	131	111	139	30
4	9	21	24	12	4	3	3	31
37	49	65	66	55	47	23	17	32
4	18	24	22	22	18	13	8	33
16	28	41	31	28	16	11	5	34
6	11	13	10	9	8	3	4	35
7	8	4	12	11	6	6	1	36
10	9	25	12	7	10	12	9	37
64	88	106	100	42	56	28	17	38
8	21	26	19	17	6	3	7	39
192	290	323	333	304	179	109	54	40
23	43	67	57	47	55	44	16	41
3	9	8	7	1	9	4	2	42
32	63	58	71	44	25	12	7	43
6	13	14	11	13	5	6	2	44
19	28	47	41	39	20	15	28	45
–	–	–	–	–	–	–	–	46
–	2	1	2	1	1	–	–	47

c. Number of newly employed fishery workers by main type of fisheries

Type of fisheries		Total	Male							
			Sub total	15~19	20~24	25~29	30~34	35~39	40~44	45~49
Total	1	3,536	3,308	2,015	416	190	125	132	125	87
Factory ship type										
Whaling	2	6	6	6	–	–		–	–	–
Trawls	3	38	38	25	7	3	1	2	–	–
Tuna long line	4	16	16	11	3	–	2	–	–	-
Salmon fishing	5	33	33	23	9	–	1	–	–	–
Crab fishing	6	16	16	8	2	1	2	1	1	–
North Pacific Ocean long line and gill net	7	9	9	5	–	2	–	1	–	1
Coastal whaling	8	2	2	2	–		-	–	–	–
Trawls										
Distant water trawl	9	97	97	70	15	9	3	–	–	–
Trawl, west of 128°30′E	10	32	32	14	7	5	1	3	–	1
Off shore trawls										
One boat operation	11	49	48	28	4	7	3	1	–	5
Two boats operation	12	21	21	9	3	6	–	2	1	–
Small trawl	13	169	160	104	23	9	5	4	5	4
Other trawls	14	9	9	5	2	–	–	2	–	–
Surrounding nets										
Purse seines										
One boat operation	15	159	157	99	18	8	5	5	6	4
Two boats operation	16	42	42	24	7	1	3	2	5	–
Other surrounding nets	17	40	39	11	7	2	3	4	6	–
Lift nets										
Saury stick-held dipnet	18	16	16	9	3	–	1	2	1	–
Other lift nets	19	32	32	14	5	4	1	1	3	–
Gill nets										
Salmon drift gill net	20	54	54	35	9	3	2	3	1	1
Other gill nets	21	261	243	148	30	12	9	11	10	7
Pole-and-line, anglings										
Skipjack pole-and-line	22	189	189	141	26	4	5	2	2	3
Mackerel pole-and-line	23	11	11	3	3	1	1	1	1	1
Squid angling	24	365	361	254	31	20	12	8	17	5
Other anglings	25	231	223	99	20	9	10	13	18	14
Long lines										
Tuna long line	26	173	171	122	22	9	3	8	3	1
Salmon long line	27	14	14	9	2	1	–	1	1	–
Alaska pollack long line	28	5	5	4	–	–	–	1	–	–
Other long lines	29	115	110	86	8	7	1	1	3	1
Beach seine	30	15	12	3	1	2	–	–	1	2
Boat seine of drawers type	31	26	25	9	4	2	2	2	2	2
Boat seine	32	103	91	62	9	3	1	1	4	–
Large set net	33	76	75	32	10	6	7	4	–	4
Small set net	34	111	103	36	14	6	6	8	6	6
Shellfish collecting	35	89	69	42	5	5	2	5	1	2
Seaweed collecting	36	159	138	88	15	3	6	4	6	7
Other capturing fisheries	37	163	158	93	17	11	5	9	6	2
Culture in marine water										
"Nori" laver culture	38	281	221	146	36	12	6	9	3	3
Oyster culture	39	26	26	14	7	1	1	–	–	–
Pearl culture	40	28	9	2	2	1	3	1	–	–
Pearl oyster culture	41	19	16	7	2	3	2	2	–	–
"Wakame" seaweed culture	42	60	53	39	9	1	–	1	–	–
Young yellowtail culture	43	97	88	36	14	8	7	5	4	5
Common scallop culture	44	45	44	25	3	2	3	2	3	4
Other cultures	45	27	19	7	2	–	–	–	5	2
Inland water fisheries and culture	46	2	2	2	–	–	-	–		–
Others	47	5	5	4	–	1	-	–	-	–

Male				Female												
50~54	55~59	60~64	65 years old and over	Sub total	15~19	20~24	25~29	30~34	35~39	40~44	45~49	50~54	55~59	60~64	65 years old and over	
59	70	60	29	228	66	54	20	19	21	10	13	7	7	7	4	1
-	-	-	-	-	-	-	-	-	-	-			-	-	-	2
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
-	1	-	-	-		-	-	-			-	-	-	-	-	6
-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	7
-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	8
-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	9
-	-	1	-		-	-	-	-	-	-	-	-	-	-	-	10
-	-	-	-	1	1	-	-	-	-	-		-	-	-	-	11
-	-	-	-	-	-	-	-	-		-	-	-			-	12
1	3	-	2	9	2	2	1	-	2	-	1	-	-	1	-	13
-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	14
6	2	3	1	2		1	-	-	-	-	-	1	-		-	15
-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	16
2	2	-	2	1	1	-		-	-	-	-	-	-		-	17
-	-	-	-	-	-	-	-		-		-	-	-	-	-	18
1	1	1	1		-	-	-	-	-	-	-	-	-	-	-	19
	-		-	-	-	-	-	-	-	-	-	-			-	20
4	5	5	2	18	2	5	1	4	2	1	2	1	-	-	-	21
1	1	4	-	-	-	-	-	-	-		-	-	-	-	-	22
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
4	5	3	2	4	2	-	-	-	1	-	1	-	-	-	-	24
7	17	13	3	8	-	-	-	1	1	2	-	1	1	1	1	25
1	-	1	1	2	2	-		-	-	-	-	-	-	-		26
-	-				-				-			-	-	-	-	27
-	-	-	-	-	-				-		-	-	-	-	-	28
2	-	1	-	5	1	1	1	1	-	-	1			-	-	29
-	2	-	1	3		1	1	-	1		-	-	-	-	-	30
1	-	-	1	1	-		-	-		1	-	-		-	-	31
-	6	3	2	12	3	2	2	1	1		-	1	1	1	-	32
6	5	1	-	1	1	-	-	-			-	-	-	-		33
4	6	5	6	8	2	1	1	1	2	-	1	-	-	-		34
2	3	1	1	20	6	8	-	1	2	1	1		-	-	1	35
3	1	5	-	21	12	2		1	-	1	2	-	-	2	1	36
4	6	3	2	5	1	1	-	1	-	-	1	-	1	-	-	37
2	2	2	-	60	22	22	7	3	2	-	2	1		1	-	38
1	-	2	-		-		-	-	-		-	-	-	-	-	39
-	-	-	-	19	3	5	2	2	3	-	1	1	1	1		40
-	-		-	3	1		1	1		-			-	-	-	41
2		1		7	3	1	1	-	1	1	-	-	-	-	-	42
2	2	4	1	9	1	1	2	1	1	1	-	-	1	-	1	43
2	-	-	-	1	-	-	-	-	1		-	-	-		-	44
1	-	1	1	8	-	1	-	1	1	2	-	1	2	-	-	45
-	-	-	-	-	-		-	-	-	-	-		-	-	-	46
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		47

d. Number of newly employed fishery workers by type of businesses mainly engaged in the previous year

Sex · Age		Total	Type of business mainly engaged in		
			Agriculture & forestry	Mining or construction	Manufacturing
Total	1	3,536	159	284	186
Male					
Sub-total	2	3,308	128	279	166
15 ~ 19 years old	3	2,015	6	35	22
20 ~ 24	4	416	17	57	50
25 ~ 29	5	190	4	35	27
30 ~ 34	6	125	7	24	17
35 ~ 39	7	132	20	33	17
40 ~ 44	8	125	14	38	5
45 ~ 49	9	87	16	18	11
50 ~ 54	10	59	11	11	5
55 ~ 59	11	70	15	13	6
60 ~ 64	12	60	9	12	6
65 years old and over	13	29	9	3	–
Female					
Sub-total	14	228	31	5	20
15 ~ 19 years old	15	66	–	1	4
20 ~ 24	16	54	5	–	9
25 ~ 29	17	20	4	–	1
30 ~ 34	18	19	3	–	1
35 ~ 39	19	21	5	1	1
40 ~ 44	20	10	3	–	1
45 ~ 49	21	13	4	2	–
50 ~ 54	22	7	3	–	1
55 ~ 59	23	7	–	–	–
60 ~ 64	24	7	3	–	–
65 years old and over	25	4	1	1	2

Note: 10 big citys are
Tokyo, Osaka Kyoto, Nagoya, Kobe, Yokohama, Kawasaki, Sapporo, Kitakyushu, Fukuoka

Whole sale, retail sale	Others	Address when they engaged in business other than fishery				Not worked in previous year	
		Present address	Others				
			Sub-total	10 big citys	Others		
100	742	757	714	319	395	2,065	1
81	674	689	639	294	345	1,980	2
7	101	81	90	48	42	1,844	3
22	174	130	190	99	91	96	4
13	107	74	112	52	60	4	5
9	64	60	61	22	39	4	6
5	50	67	58	25	33	7	7
9	55	75	46	16	30	4	8
6	32	58	25	12	13	4	9
4	27	45	13	4	9	1	10
3	27	41	23	7	16	6	11
3	23	38	15	6	9	7	12
–	14	20	6	3	3	3	13
19	68	68	75	25	50	85	14
–	4	4	5	3	2	57	15
9	24	9	38	12	26	7	16
–	12	2	15	5	10	3	17
1	7	8	4	–	4	7	18
2	7	12	4	3	1	5	19
4	2	6	4	1	3	–	20
–	4	8	2	–	2	3	21
–	1	4	1	1	–	2	22
2	4	5	1	–	1	1	23
1	3	6	1	–	1	–	24
–	–	4	–	–	–	–	25

2. BACKGROUND OF MARINE FISHERY

(1) Facilities related to fisheries

a. Fishing ports

(a) Number of fishing ports (b) Facilities

Type of fishing ports		Number of fishing ports	Length of mole	Length of quay	Area of mooring place
			m	m	m^2
Total	1	3,528	1,077,762	520,627	549,751,204
Type of fishing ports					
Type 1	2	2,090	359,742	87,943	38,987,785
Type 2	3	465	193,758	53,277	26,380,792
Type 3	4	109	86,016	83,322	32,089,511
Type 4	5	89	43,533	14,829	6,996,662
Other ports and harbors	6	775	394,713	281,256	445,296,454

b. Oil station

Size of number of worker		Number of oil stations by type of management			
		Total	Individual	Company	Fishery cooperative
Total	1	2,664	691	1,009	856
1 ~ 3 persons	2	1,419	481	224	647
4 ~ 9	3	873	195	510	134
10 ~ 29	4	292	15	221	50
30 persons and over	5	80	–	54	25

c. Shipyards

Size of number of workers		Number of shipyards by type of management					Number of workers	Slips
		Total	Individual	Company	Fishery cooperative	Others		
							persons	
Total	1	3,439	2,885	503	34	17	58,650	3,459
1 ~ 3 persons	2	2,417	2,343	48	19	7	4,156	1,621
4 ~ 9	3	590	470	103	13	4	3,232	705
10 ~ 29	4	248	65	178	2	3	3,977	523
30 persons and over	5	184	7	174	–	3	47,285	610

(c) Number of boats used ports

Length of landing place	Mooring basin		Total	Non-powered boats	Boats with outboard engine	Powered boats	
	Length	Area					
m	m	m^2	boats	boats	boats	boats	
955,489	193,952	3,622,671	629,990	55,240	78,228	496,522	1
277,154	75,772	1,501,910	201,342	28,153	38,833	134,356	2
179,304	43,523	852,829	121,841	12,934	15,848	93,059	3
65,799	16,564	376,269	71,264	3,945	5,276	62,043	4
19,792	9,529	195,117	26,312	1,902	1,887	22,523	5
413,440	38,564	696,546	209,231	8,306	16,384	184,541	6

Others	Number of workers	Bulk of oil tank				
		Total	Gasoline	Light oil	Heavy oil	
		kℓ	kℓ	kℓ	kℓ	
108	17,105 persons	601,273	74,840	88,862	437,571	1
67	2,853	97,257	7,979	10,541	78,737	2
34	4,875	149,305	17,041	23,804	108,460	3
6	4,468	248,544	41,023	41,675	165,846	4
1	4,909	106,167	8,797	12,842	84,528	5

Number of facilities		Built or repaired fishing boats in a year								
		New built								
		F · R · P boats			Wooden boats			Steel boats		
Docks	Upper beams	Non-powered boats	Powered boats		Non-powered boats	Powered boats		Powered boats		
			Number of boats	Total tonnage		Number of boats	Total tonnage	Number of boats	Total tonnage	
		boats	boats	gross ton	boats	boats	gross ton	boats	gross ton	
164	2,987	11,489	8,007	30,505	4,255	8,847	44,976	1,185	215,993	1
27	1,243	1,161	1,262	3,730	3,571	6,338	22,644	14	137	2
31	738	980	2,023	6,910	563	1,904	10,497	35	402	3
16	485	883	1,383	5,710	91	524	4,473	163	3,988	4
90	521	8,465	3,339	14,155	30	81	7,362	973	211,466	5

c. Shipyards (concluded)

Size of number of workers		Repaired		Number of shipyards by size of maximum F · R · P boats				
		Powered boats		Sub total	Non-powered boats	Powered boats		
		Number of boats	Total tonnage			Less than 10 gross tons	10~50	50 gross ton and over
		boats	G.T					
Total	1	89,237	3,748,716	871	176	588	97	10
1 ~ 3 persons	2	25,853	116,589	438	117	310	11	–
3 ~ 9	3	20,565	272,562	279	38	211	27	3
10 ~ 29	4	20,855	755,281	108	13	52	42	1
30 persons and over	5	21,964	2,604,284	46	8	15	17	6

d. Shops for fishery materials

Size of number of workers		Number of shops for fishery materials by type of management				
		Total	Individual	Company	Fishery cooperative	Others
Total	1	5,477	2,059	1,617	1,756	45
1 ~ 3 persons	2	3,353	1,680	412	1,239	22
4 ~ 9	3	1,336	327	634	364	11
10 ~ 29	4	570	48	407	108	7
30 persons and over	5	218	4	164	45	5

e. Ironworks

Size of number of workers		Number of iron-works by type of management				
		Total	Individual	Company	Fishery cooperative	Others
Total	1	2,039	1,340	658	37	4
1 ~ 3 persons	2	1,155	1,033	96	24	2
4 ~ 9	3	582	272	301	7	2
10 ~ 29	4	233	35	194	4	–
30 persons and over	5	69	–	67	2	–

building capacity for fishing boats

Wooden boats					Steel boats				Repaired only	
Subtotal	Non-powered boats	Powered boats			Subtotal	Less than 200 gross tons	200~500	500 gross tons and over		
		Less than 10 gross tons	10~50	50 gross tons and over						
2,594	448	1,906	230	10	145	101	24	20	615	1
2,097	409	1,602	84	2	5	5	–	–	369	2
379	31	255	91	2	9	9	–	–	109	3
96	8	41	46	1	36	36	–	–	81	4
22	–	8	9	5	95	51	24	20	56	5

Number of workers	Number of shops by kind of fishery materials transacted						
	Equipments for fishery operation	Equipments for navigation	Nets and fishing gears	Materials for culture	Fish boxes	Paints	
persons							
38,219	1,227	2,013	3,488	1,533	1,014	2,273	1
6,358	592	1,036	2,356	911	472	1,506	2
7,420	364	609	732	401	278	518	3
8,839	193	274	256	147	196	179	4
15,602	78	94	144	74	68	70	5

Number of workers	Number of repaired engine of fishing boats	
persons		
17,057	321,212	1
2,286	102,989	2
3,377	110,304	3
3,542	74,455	4
7,852	33,464	5

f. Ice-making cold-strage and freezing-plants

(a) Number of plants by type of managements

Size of workers' number		Total	Individual	Company
Total	1	4,710	1,337	2,412
For business				
Subtotal	2	1,727	87	1,212
1 ~ 3 persons	3	267	24	78
4 ~ 9	4	464	26	298
10 ~ 29	5	641	25	530
30 ~ 49	6	188	11	153
50 persons and over	7	167	1	153
For own use				
Subtotal	8	2,983	1,250	1,200
1 ~ 3 persons	9	909	407	268
4 ~ 9	10	817	397	260
10 ~ 29	11	859	388	390
30 ~ 49	12	197	45	128
50 persons and over	13	201	13	154

(b) Number of plants by dialy capacity of ice-making, cold-storage, and freezing

Size of workers' number		Number of plants by daily ice-making capacity			
		Subtotal	Less than 10 metric tons	10 ~ 30	30 metric tons and over
Total	1	975	331	430	214
For business					
Subtotal	2	698	192	323	183
1 ~ 3 persons	3	60	49	11	–
4 ~ 9	4	236	95	126	15
10 ~ 29	5	278	36	136	106
30 49	6	70	7	28	35
50 persons and over	7	54	5	22	27
For own use					
Subtotal	8	277	139	107	31
1 ~ 3 persons	9	47	39	7	1
4 ~ 9	10	90	47	42	1
10 ~ 29	11	75	30	26	19
30 ~ 49	12	23	9	12	2
50 persons and over	13	42	14	20	8

Co-operatives and associations		Others	
Fishery cooperatives	Others		
822	104	35	1
370	44	14	2
144	18	3	3
121	13	6	4
76	5	5	5
18	6	–	6
11	2	–	7
452	60	21	8
191	35	8	9
134	17	9	10
74	3	4	11
24	–	–	12
29	5	–	13

Number of plants by daily cold strage capacity				Number of plans by daily freezing capacity				
Subtotal	Less than 300 metric tons	300~1,000	1,000 metric tons and over	Subtotal	Less than 20 metric tons	10~30	30 metric tons and over	
4,694	2,696	1,051	947	2,439	1,103	979	357	1
1,715	448	542	725	974	307	470	197	2
263	202	48	13	53	33	14	6	3
458	147	206	105	205	110	69	26	4
640	70	177	393	417	121	217	79	5
187	17	56	114	149	31	84	34	6
167	12	55	100	150	12	86	52	7
2,979	2,248	509	222	1,465	796	509	160	8
909	850	56	3	228	182	39	7	9
815	656	119	40	357	240	94	23	10
859	593	187	79	550	279	215	56	11
197	94	78	25	156	48	90	18	12
199	55	69	75	174	47	71	56	13

g. Number of fishery processing plants by type of managements.

Main type of processing		Total	Individual	Company
Total number	1	16,383	12,141	3,804
Canned and bottled	2	181	30	141
Paste				
Kamaboko	3	2,816	1,950	833
Fish sausage and fish ham	4	35	4	30
Frozen				
Frozen foods	5	269	51	206
Frozen kneaded	6	69	2	58
Other frozen fishes and shellfishes	7	603	121	382
Salted and dried				
Dried	8	1,963	1,863	79
Salted-dried	9	2,358	1,998	339
Boiled-dried	10	3,057	2,816	140
Salted	11	684	453	203
Smoked-dried	12	72	46	24
Cured fishes	13	864	720	131
Shaved dry fish	14	455	317	137
Tsukudani	15	294	133	160
Processed laver	16	334	114	212
Ager ager	17	4	1	2
Other processed foods	18	1,986	1,346	593
Fish oil	19	21	11	9
Feed and fertilizer	20	318	165	125

(2) Marketing of fishery products

a. Fish markets

(a) Number of fish markets by facilities, etc.

Yearly traded value		Number of fish markets by syze of market facilities					
		Total	Area of counter				
			Less than 500 m²	500 ~ 1,000	1,000 ~ 5,000	5,000 ~ 10,000	10,000 m² and over
Total	1	1,102	768	131	165	27	11
Yearly traded value at a fish market							
Less than 5 million yen	2	13	12	1	–	–	–
5 ~ 10 million yen	3	15	15	–	–	–	–
10 ~ 50	4	192	188	4	–	–	–
50 ~ 100	5	171	164	2	5	–	–
100 ~ 500	6	453	332	78	41	2	–
500 ~ 1 billion yen	7	103	38	24	39	2	–
1 ~ 2 billion yen	8	72	15	15	36	4	2
2 ~ 3	9	20	3	2	14	1	–
3 billion yen and over	10	63	1	5	30	18	9

Co-operatives and associations		Others	
Fishery cooperatives	Others		
281	84	73	1
6	1	3	2
6	13	14	3
–	1	–	4
9	3	–	5
7	2	–	6
91	9	–	7
15	4	2	8
12	5	4	9
50	18	33	10
23	2	3	11
2	–	–	12
3	3	7	13
–	–	1	14
1	–	–	15
5	3	–	16
1	–	–	17
34	8	5	18
1	–	–	19
15	12	1	20

Number of fish markets by syze of market facilities									Number of fish markets managed by single or plural management units		
Area of roofed place					Railroad for port		Exclusive parking place				
Less than 100 m²	100 ~ 500	500 ~ 1,000	1,000 ~ 5,000	5,000 m² and over	Layed	Not-layed	Held	Not held	Single	Plural	
310	507	114	144	27	31	1,071	432	670	1,056	46	1
12	1	–	–	–	–	13	–	13	13	–	2
11	4	–	–	–	–	15	2	13	15	–	3
123	67	2	–	–	–	192	39	153	192	–	4
72	95	1	3	–	–	171	48	123	171	–	5
84	285	59	25	–	1	452	186	267	448	5	6
8	38	23	34	–	–	103	49	54	97	6	7
–	13	19	38	2	5	67	46	26	65	7	8
–	3	2	14	1	3	17	12	8	18	2	9
–	1	8	30	24	22	41	50	13	37	26	10

(b) Traded value and quanity

Yearly traded value		Number of fish markets and traded quantity by type of management units				
		Total				
		Number of fish markets	Yearly traded quantity			Yearly traded quantity
			Total amount of quantity	Primay landing quantity	Secondary landing quantity	
			metric ton	metric ton	metric ton	10 thousands yen
Total	1	1,102	8,360,119	5,936,618	2,423,501	137,184,977
Yearly traded value at a fish market						
Less than 5 million yen	2	13	411	410	1	4,268
5 ~ 10 million yen	3	15	448	438	10	10,140
10 ~ 50	4	192	27,653	25,718	1,935	568,148
50 ~ 100	5	171	62,764	54,033	8,731	1,231,106
100 ~ 500	6	453	646,374	570,137	76,237	10,448,834
500 ~ 1 billion yen	7	103	504,963	397,265	107,698	7,164,326
1 ~ 2 billion yen	8	72	676,650	538,947	137,703	10,097,137
2 ~ 3	9	20	311,233	243,546	67,687	4,717,747
3 billion yen and over	10	63	6,129,623	4,106,124	2,023,499	102,943,271

(b) Traded value and quantity (concluded)

Yearly traded value		Number of fish markets and traded quantity by type of management units				
		Fishery cooperatives associations				
		Number of fish markets	Yearly traded quantity			Yearly traded quantity
			Total amount of quantity	Primary landing quantity	Secondary landing quantity	
			metric ton	metric ton	metric ton	10 thousands yen
Total	1	28	225,218	192,845	32,373	3,235,272
Yearly traded value at a fish market						
Less than 5 million yen	2	–	–	–	–	–
5 ~ 10 million yen	3	–	–	–	–	–
10 ~ 50	4	1	44	40	4	1,454
50 ~ 100	5	2	563	293	270	14,400
100 ~ 500	6	7	10,654	4,781	5,873	204,549
500 ~ 1 billion yen	7	5	20,476	10,801	9,675	380,187
1 ~ 2 billion yen	8	6	42,848	32,644	10,204	778,125
2 ~ 3	9	5	82,321	77,328	4,993	1,165,787
3 billion yen and over	10	2	68,312	66,958	1,354	690,770

Number of fish markets and traded quantity by type of management units

Public bodies					Fishery cooperatives					
Number of fish markets	Yearly traded quantity			Yearly traded quantity	Number of fish markets	Yearly traded quantity			Yearly traded quantity	
	Total amount of quantity	Primary landing quantity	Secondary landing quantity			Total amount of quantity	Primary landing quantity	Secondary landing quantity		
	metric ton	metric ton	metric ton	10 thousands yen		metric ton	metric ton	metric ton	10 thousands yen	
54	3,756,249	1,979,267	1,776,982	78,750,659	878	2,743,906	2,635,436	108,470	35,459,995	1
–	–	–	–	—	12	397	397	–	3,798	2
–	–	–	–	–	15	448	438	10	10,140	3
1	205	205	–	3,438	182	25,336	24,997	339	533,773	4
1	245	245	–	8,448	150	54,249	51,512	2,737	1,075,314	5
5	7,625	4,062	3,563	149,582	389	568,500	537,879	30,621	8,755,363	6
5	56,769	51,545	5,224	355,553	64	292,310	273,812	18,498	4,187,437	7
9	81,908	44,846	37,062	1,441,191	41	456,352	446,708	9,644	5,817,258	8
–	–	–	–	–	10	1 80,404	160,360	20,044	2,320,552	9
33	3,609,497	1,878,364	1,731,133	76,792,447	15	1,165,910	1,139,333	26,577	12,756,360	10

Number of fish markets and traded quantity by type of management units

Companies					Individuals					
Number of fish markets	Yearly traded quantity			Yearly traded quantity	Number of fish markets	Yearly traded quantity			Yearly traded quantity	
	Total amount of quantity	Primary landing quantity	Secondary landing quantity			Total amount of quantity	Primary landing quantity	Secondary landing quantity		
	metric ton	metric ton	metric ton	10 thousands yen		metric ton	metric ton	metric ton	10 thousands yen	
131	1,630,360	1,127,649	502,711	19,660,923	11	4,386	1,421	2,965	78,128	1
–	–	–	–	–	1	14	13	1	470	2
–	–	–	–	–	–	–	–	–	–	3
4	1,289	234	1,055	16,124	4	779	242	537	13,359	4
14	6,947	1,520	5,427	107,145	4	760	463	297	25,799	5
50	56,762	22,712	34,050	1,300,840	2	2,833	703	2,130	38,500	6
30	135,408	61,107	74,301	2,241,149	–	–	–	–	–	7
15	95,542	14,749	80,793	2,060,563	–	–	–	–	–	8
5	48,508	5,858	42,650	1,231,408	–	–	–	–	–	9
13	1,285,904	1,021,469	264,435	12,703,694	–	–	–	–	–	10

b. Number of wholesalers for fishery products

Yearly traded value of wholesalers		Number of wholesalers	Number of wholesalers by type of managment		
			Fishery wholesalers	Fishery cooperative association	Company
Total	1	1,199	886	59	235
Yearly traded value of wholesalers					
Less than 5 million yen	2	14	13	–	–
5 ~ 10 million yen	3	16	16	–	–
10 ~ 50	4	203	183	5	8
50 ~ 100	5	178	154	3	15
100 ~ 500	6	476	387	21	63
500 million ~ 1 billion yen	7	123	59	10	54
1 ~ 2 billion yen	8	81	44	8	29
2 ~ 3	9	31	13	8	10
3 billion yen and over	10	77	17	4	56

c. Number of middlemen for fishery products

Yearly traded value of middlemen		Number of middlemen	Number of middlemen by type of management		
			Individual	Company	Others
Total	1	48,324	40,765	7,080	479
Yearly traded value of middlemen					
Less than 1 million yen	2	12,130	11,491	562	77
1 ~ 5	3	15,105	14,066	928	111
5 ~ 10	4	7,046	6,219	765	62
10 ~ 50	5	8,557	6,608	1,846	103
50 ~ 100	6	2,515	1,497	965	53
100 ~ 500	7	2,592	863	1,674	55
500 million yen ~ 1 billion yen	8	272	20	244	8
1 billion yen and over	9	107	1	96	10

		Number of wholesalers by number of employees					
Individual	Others	1 ~ 9 persons	10 ~ 29	30 ~ 49	50 ~ 99	100 persons & over	
14	5	776	276	57	57	33	1
1	–	14	–	–	–	–	2
–	–	15	1	–	–	–	3
6	1	200	3	–	–	–	4
6	–	165	13	–	–	–	5
1	4	337	130	8	1	–	6
–	–	35	73	12	3	–	7
–	–	8	47	11	12	3	8
–	–	1	7	12	7	4	9
–	–	1	2	14	34	26	10

Number of middlemen by dewelling places			Number of middlemen by type of business						
Inside of the prefecture		Outside of the prefecture	Shipping	Wholesale	Processing	Retail sale		Others	
Same municipality	Others					Shop held	Shop not held		
39,889	7,738	697	4,240	6,253	8,593	19,092	8,876	1,270	1
10,356	1,677	97	325	379	1,854	4,076	4,821	675	2
12,329	2,610	166	698	745	2,327	7,653	3,319	363	3
5,764	1,200	82	584	577	1,358	3,947	492	88	4
7,135	1,243	179	1,519	1,591	2,067	3,074	196	110	5
1,928	509	78	522	1,191	465	271	43	23	6
2,056	450	86	492	1,594	422	68	5	11	7
227	39	6	62	132	76	2	–	–	8
94	10	3	38	44	24	1	–	–	9

d. Marketing status of caught fishes

(a) Quantity of landing and catches by manner of landins

Fish species, etc.		Quantity of catches accounting for landing place	Quantity of landing	Living fishes
		kg	kg	kg
Total	1	7,407,360	7,129,848	130,999
Fishes				
Subtotal of fishes	2	5,995,708	5,894,124	101,558
Tuna, sword fish and marines	3	393,541	365,604	–
Skipjack	4	228,286	228,062	1
Salmons	5	84,708	72,397	–
Herring	6	40,429	40,428	–
Sardines and anchovy	7	519,377	519,330	23,169
Jack mackerel, scad	8	205,197	205,153	2,366
Mackerels	9	1,172,601	1,172,568	372
Saury	10	215,820	215,820	–
Yellowtails	11	120,148	120,148	24,507
Flownders, halibuts	12	212,321	203,999	6,093
Alaska pollack	13	1,415,063	1,375,343	–
Atka mackerel	14	169,357	169,330	–
Sand launce	15	178,032	178,032	64
Other fishes	16	1,040,828	1,027,910	44,986
Other marine animals				
Subtotal of other marin animals	17	823,434	822,037	29,418
Lobsters, prawns shrimps	18	60,517	60,510	10,086
Crabs	19	52,414	52,399	1,287
Common squid	20	512,342	511,679	57
Other squids and cuttle fishes	21	98,190	97,985	5,341
Octopuses	22	45,020	45,018	6,897
Others	23	54,951	54,446	5,750
Marine mammals	24	53,335	53,335	6
Shell-fishes				
Subtotal of shellfishes				
With shell	25	534,883	327,341	17
Stripped	26	–	33,011	–
Oyster				
With shell	27	207,708	9,736	–
Stripped	28	–	31,721	–
Common scallop				
With shell	29	46,559	46,209	–
Stripped	30	–	41	–
Other shellfishes				
With shell	31	280,616	271,396	17
Stripped	32	–	1,249	–
Seaweeds				
Subtotal of seaweeds				
Raw	33	13,233,722	198,180	–
Dried	34	–	2,571,841	–
"Itanori" laver as dried square sheet	35	–	4,922,087,182 (sheets)	–
Laver				
Raw	36	161,829	10,594	–
Dried	37	–	3,852	–
"Itanori" laver as dried square sheet	38	–	4,922,087,182 (sheets)	–
Other seaweeds				
Raw	39	13,071,893	187,586	–
Dried	40	–	2,567,989	–

Fesh fishes	Frozen		Processed products		
	Weight on products	Weight converted in raw	Weight on products	Weight converted in raw	
kg	kg	kg	kg	kg	
6,325,779	644,058	733,927	29,012	44,446	1
5,226,934	537,078	626,273	28,554	40,942	2
128,037	237,567	265,504	–	–	3
140,800	87,261	87,485	–	–	4
43,783	203	243	28,411	40,682	5
10,556	29,870	29,870	2	3	6
496,067	53	53	41	88	7
199,837	2,907	2,907	43	87	8
1,171,821	339	357	36	51	9
215,495	325	325	–	–	10
95,640	1	1	–	–	11
125,815	72,091	80,413	–	–	12
1,355,949	19,394	59,114	–	–	13
169,251	79	106	–	–	14
177,968	–	–	–	–	15
895,915	86,988	99,895	21	31	16
703,892	88,602	89,276	125	844	17
44,994	5,430	5,437	–	–	18
50,856	256	271	–	–	19
429,973	81,646	82,297	3	15	20
92,176	423	424	45	249	21
37,281	840	840	–	2	22
48,612	7	7	77	578	23
34,951	18,378	18,378	–	–	24
327,324	–	–	–	2,660	25
32,678	–	–	333	–	26
9,736	–	–	–	2,660	27
31,388	–	–	333	–	28
46,209	–	–	–	–	29
41	–	–	–	–	30
271,379	–	–	–	–	31
1,249	–	–	–	–	32
–	–	–	–	–	33
–	–	–	–	–	34
–	–	–	–	–	35
–	–	–	–	–	36
–	–	–	–	–	37
–	–	-	–	–	38
–	–	–	–	–	39
–	–	–	–	–	40

(b) Quantity of landings by disposition for utilization and by shipping area.

Fish species, etc.		Total amount of quantity of landings	Quantity of landings listed up at markets		
			Subtotal	For fresh (including living fishes)	
				Subtotal	Shipped to Own prefecture
					Same municipalities
		kg	kg	kg	kg
Total	1	7,109,661	5,868,395	2,443,704	453,693
Subtotal of fresh products	2	6,465,589	5,375,484	2,256,425	441,562
Subtotal of frozen products	3	644,072	492,911	187,279	12,131
Fresh products					
Tunas, sword fish and marines	4	128,038	126,079	91,662	14,762
Skipjack	5	140,800	132,668	71,843	11,787
Salmons	6	52,239	48,238	16,865	2,889
Herring	7	10,556	10,392	1,879	228
Sardines and anchovy	8	519,237	357,633	130,515	33,047
Jack mackerel, scad	9	202,204	186,068	146,500	27,585
Mackerels	10	1,172,193	1,150,521	453,125	63,257
Saury	11	215,495	200,122	51,617	5,738
Yellowtails	12	120,145	56,089	55,693	9,863
Flounders, halibuts	13	131,907	104,558	84,065	21,803
Alaska pollack	14	1,355,949	1,328,881	194,789	13,290
Atka mackerel	15	169,251	153,566	41,156	4,372
Sand launce	16	178,032	143,855	7,997	3,721
Other fishes	17	940,923	685,989	467,213	130,968
Lobosters, prawns and shrimps	18	55,081	38,232	30,676	10,534
Crabs	19	52,145	41,430	22,718	5,701
Common squid	20	430,030	357,294	177,890	21,441
Other squids and cuttlefishes	21	97,515	60,121	51,731	13,711
Octopuses	22	44,178	30,468	22,043	7,077
Other marine animals	23	54,363	29,305	19,671	5,993
Marine mamals	24	34,957	590	560	54
Oyster					
With shell	25	9,736	2,120	2,120	341
Stripped	26	31,721	10,778	10,724	829
Common scallop					
With shell	27	46,209	26,699	18,268	7,070
Stripped	28	41	–	–	–
Other shelfishes					
With shell	29	270,947	93,208	84,525	25,311
Stripped	30	1,697	580	580	190
Frozen					
Tunas, sword fish and marines	31	237,581	186,133	78,261	1,074
Skip jack	32	87,260	67,320	15,452	952
Salmons	33	203	203	16	11
Herring	34	29,870	21,341	8,502	530
Flounders, halibuts	35	72,091	67,181	22,890	2,495
Other fishes	36	110,086	63,632	22,000	2,476
Common squid	37	81,647	80,799	36,939	3,986
Octopuses	38	840	276	206	140
Other marine animals	39	24,494	6,026	3,013	467

Note: 6 big cities are Tokyo, Osaka, Nagoya, Kyoto, Kobe, Yokohama.

Quantity of landings listed up at markets						Quantity of landings not listed up at markets	
For fresh (including living fishes)				For freezing	For processing		
Shipped to Own prefecture Other municipalities	Shipped to Neighbor prefecture	Shipped to Distant prefecture	Shipped to 6 big cities				
kg	kg	kg	kg	kg	kg	kg	
721,196	239,766	448,395	580,654	1,094,143	2,330,548	1,241,266	1
676,779	216,922	387,656	533,506	907,665	2,211,394	1,090,105	2
44,417	22,844	60,739	47,148	186,478	119,154	151,161	3
13,320	8,671	14,581	40,328	14,526	19,891	1,959	4
14,669	10,408	11,395	23,584	5,708	55,117	8,132	5
5,400	1,639	1,315	5,622	4,623	26,750	4,001	6
1,182	62	250	157	6,666	1,847	164	7
39,323	27,014	14,806	16,325	58,027	169,091	161,604	8
21,564	11,229	32,795	53,327	9,733	29,835	16,136	9
80,518	44,543	156,471	108,336	308,701	388,695	21,672	10
24,421	4,936	5,995	10,527	136,606	11,899	15,373	11
13,568	5,905	6,328	20,029	391	5	64,056	12
33,747	8,709	6,855	12,951	4,526	15,967	27,349	13
123,698	7,699	27,960	22,142	36,300	1,097,792	27,068	14
28,504	1,059	6,788	433	36,226	76,184	15,685	15
3,934	113	211	18	117,450	18,408	34,177	16
140,002	39,927	49,203	107,113	48,901	169,875	254,934	17
10,039	2,359	1,692	6,052	447	7,109	16,849	18
5,593	1,993	1,070	8,361	2,357	16,355	10,715	19
49,687	15,617	30,965	60,180	105,119	74,285	72,736	20
13,510	6,615	5,792	12,103	1,366	7,024	37,394	21
7,850	1,638	548	4,930	1,840	6,585	13,710	22
7,471	1,195	606	4,406	6,475	3,159	25,058	23
85	83	336	2	–	30	34,367	24
1,692	65	19	3	–	–	7,616	25
570	155	1,292	7,878	54	–	20,943	26
10,683	2	310	203	318	8,113	19,510	27
–	–	–	–	–	–	41	28
25,586	15,225	9,973	8,430	1,305	7,378	177,739	29
163	61	100	66	–	–	1,117	30
13,285	5,032	34,694	24,176	59,191	48,681	51,448	31
8,816	608	4,339	737	8,947	42,921	19,940	32
5	–	–	–	–	187	–	33
2,308	893	3,678	1,093	11,072	1,767	8,529	34
6,638	7,692	2,386	3,679	40,716	3,575	4,910	35
6,877	5,214	5,230	2,203	33,648	7,984	46,454	36
5,171	2,811	10,062	14,909	30,088	13,772	848	37
21	19	13	13	45	25	564	38
1,296	575	337	338	2,771	242	18,468	39

3. INLAND WATER FISHERIES

(1) Inland water cultures

a. Number of management units by main kind of fish of culture and by main method of culture

Main kind of fish of culture		Total	Culture in pond		Reservoir culture	Cage culture	
			Culture in standing water	Culture in running water			
Total	1	22,067	12,147	5,738	4,092	90	1
Ratio of composition (%)	2	(100.0)	(55.0)	(26.0)	(18.6)	(0.4)	2
For foods							
Trouts	3	1,866	107	1,731	21	7	3
Sweet fish	4	379	4	369	4	2	4
Common carp	5	5,595	2,263	1,716	1,559	57	5
Crucian carp	6	258	30	10	215	3	6
Eel	7	3,001	2,715	226	59	1	7
Others	8	521	359	92	69	1	8
For seed							
Trouts	9	152	5	144	2	1	9
Sweet fish	10	17	1	15	1	–	10
Common carp	11	511	398	66	46	1	11
Eel	12	140	128	10	2	–	12
Others	13	58	35	12	11	–	13
For appreciation							
Fancy carp	14	8,236	4,971	1,282	1,970	13	14
Gold fish	15	1,292	1,119	47	124	2	15
Others	16	41	12	18	9	2	16

c. Number of management units by type of management

Main kind of fish of culture		Total	Individual	Company	Fishery cooperative	Fishery production association	Joint management	Government, public offices schools research institute	
Total	1	22,067	19,909	884	87	211	867	109	1
Ratio of composition	2	(100.0)	(90.2)	(4.0)	(0.4)	(1.0)	(3.9)	(0.5)	2
For foods									
Trouts	3	1,866	1,478	141	30	69	125	23	3
Sweet fish	4	379	258	58	6	30	23	4	4
Common carp	5	5,595	5,059	110	13	32	364	17	5
Crucian carp	6	258	186	–	–	1	70	1	6
Eel	7	3,001	2,462	403	8	33	92	3	7
Others	8	521	445	21	3	25	26	1	8
For seed									
Trouts	9	152	81	11	11	8	11	30	9
Sweet fish	10	17	3	3	4	3	1	3	10
Common carp	11	511	470	4	8	–	11	18	11
Eel	12	140	127	6	1	1	2	3	12
Others	13	58	49	1	2	–	4	2	13
For appreciation									
Fancy carp	14	8,236	7,982	109	–	8	133	4	14
Gold fish	15	1,292	1,274	14	–	1	3	–	15
Others	16	41	35	3	1	–	2	–	16

b. Number of management units by number of workers

Main kind of fish of culture	Total	1 person	2 ~ 3	4 ~ 5	6 ~ 9	10 persons and over	
Total ····· 1	22,067	11,879	8,285	1,221	440	242	1
Ratio of composition ····· 2	(100.0)	(53.8)	(37.6)	(5.5)	(2.0)	(1.1)	2
For foods							
Trouts ····· 3	1,866	712	903	162	67	22	3
Sweet fish ····· 4	379	52	206	70	39	12	4
Common carp ····· 5	5,595	3,681	1,527	196	93	98	5
Crucian carp ····· 6	258	116	85	29	18	10	6
Eel ····· 7	3,001	505	1,927	414	124	31	7
Others ····· 8	521	326	166	18	6	5	8
For seed							
Trouts ····· 9	152	64	55	18	8	7	9
Sweet fish ····· 10	17	2	8	2	3	2	10
Common carp ····· 11	511	227	241	32	4	7	11
Eel ····· 12	140	41	80	13	5	1	12
Others ····· 13	58	37	13	6	–	2	13
For appreciation							
Fancy carp ····· 14	8,236	5,584	2,358	196	59	39	14
Gold fish ····· 15	1,292	517	697	64	10	4	15
Others ····· 16	41	15	19	1	4	2	16

d. Number of individual management units by full-time or part-time

Main kind of fish of culture	Total		Full time engaged in culture		Mainly engaged in culture		Subsidiary engaged in culture		
	Number	Ratio of composition	Number	Ratio of composition	Number	Ratio of composition	Number	Ratio of composition	
Total ····· 1	19,909	100.0	1,132	5.7	3,241	16.3	15,536	78.0	1
For foods									
Trouts ····· 2	1,478	100.0	125	8.5	292	19.7	1,061	71.8	2
Sweet fish ····· 3	258	100.0	45	17.5	102	39.5	111	43.0	3
Common carp ····· 4	5,059	100.0	107	2.1	338	6.7	4,614	91.2	4
Crucian carp ····· 5	186	100.0	12	6.5	35	18.8	139	74.7	5
Eel ····· 6	2,462	100.0	468	19.0	1,107	45.0	887	36.0	6
Others ····· 7	445	100.0	8	1.8	23	5.2	414	93.0	7
For seed									
Trouts ····· 8	81	100.0	8	9.9	15	18.5	58	71.6	8
Sweet fish ····· 9	3	100.0	1	33.3	–	–	2	66.7	9
Common carp ····· 10	470	100.0	30	6.4	69	14.7	371	78.9	10
Eel ····· 11	127	100.0	22	17.3	51	40.2	54	42.5	11
Others ····· 12	49	100.0	2	4.1	4	8.2	43	87.7	12
For appreciation									
Fancy carp ····· 13	7,982	100.0	220	2.7	851	10.7	6,911	86.6	13
Gold fish ····· 14	1,274	100.0	72	5.7	348	27.3	854	67.0	14
Others ····· 15	35	100.0	12	34.3	6	17.1	17	48.6	15

(2) Fisheries in designated lakes or marshes

a. Number of management units by type of operation

Designated lake or marsh		Located prefecture's name	Total	Without fishing boats	Non-powered boats	Boats with out-board engine	Powered boats				Fish culture	Pearl culture	Others cultures	
							Less than 1 gross ton	1~3	3~5	5 gross ton and over				
Total	1		6,496	722	1,481	1,493	397	1,750	273	70	240	67	3	1
Notoriko	2	Hokkaido	25	–	–	1	–	24	–	–	–	–	–	2
Abashiriko	3	〃	48	–	4	3	2	31	8	–	–	–	–	3
Tofutsuko	4	〃	13	–	–	13	–	–	–	–	–	–	–	4
Mokotoko	5	〃	6	–	–	6	–	–	–	–	–	–	–	5
Onuma-konuma	6	〃	17	–	–	16	–	–	–	–	1	–	–	6
Toyako	7	〃	18	–	17	1	–	–	–	–	–	–	–	7
Toroko	8	〃	24	8	15	–	–	–	1	–	–	–	–	8
Akanko	9	〃	3	–	–	3	–	–	–	–	–	–	–	9
Ogawaranuma	10	Aomori	291	73	64	60	2	62	27	3	–	–	–	10
Towadako	11	Aomori Akita	57	–	–	57	–	–	–	–	–	–	–	11
Hachirogata	12	Akita	346	50	57	47	3	177	–	–	12	–	–	12
Hibarako	13	Fukushima	44	44	–	–	–	–	–	–	–	–	–	13
Inawashiroko	14	〃	38	5	14	19	–	–	–	–	–	–	–	14
Kasumigaura	15	Ibaragi	1,054	7	153	183	28	481	51	7	143	1	–	15
Hinuma	16	〃	195	3	37	155	–	–	–	–	–	–	–	16
Kitaura	17	〃	617	1	240	137	78	112	27	2	20	–	–	17
Sotonasakaura	18	〃	260	1	61	36	86	75	1	–	–	–	–	18
Chuzenjiko	19	Tochigi	39	–	–	39	–	–	–	–	–	–	–	19
Teganuma	20	Chiba	46	–	7	39	–	–	–	–	–	–	–	20
Inbanuma	21	〃	278	4	146	119	2	1	–	–	3	–	3	21
Ashinoko	22	Kanagawa	41	16	–	25	–	–	–	–	–	–	–	22
Fukushimagata	23	Niigata	10	3	7	–	–	–	–	–	–	–	–	23
Mikata-yonko	24	Fukui	47	5	16	20	2	1	–	–	3	–	–	24
Shojinko	25	Yamanashi	2	–	–	–	–	–	–	–	2	–	–	25
Yamanakako	26	〃	30	1	–	29	–	–	–	–	–	–	–	26
Kawaguchiko	27	〃	22	–	3	12	–	–	–	–	7	–	–	27
Suwako	28	Nagano	196	4	21	147	–	–	–	–	24	–	–	28
Kizakiko	29	〃	48	5	34	9	–	–	–	–	–	–	–	29
Biwako	30	Shiga	1,766	297	467	123	41	545	153	58	16	66	–	30
Yogoko	31	〃	1	1	–	–	–	–	–	–	–	–	–	31
Koyamaike	32	Tottori	65	1	8	50	6	–	–	–	–	–	–	32
Togoike	33	〃	33	–	2	31	–	–	–	–	–	–	–	33
Shinjiko	34	Shimane	722	185	91	89	131	219	5	–	2	–	–	34
Kojimako	35	Okayama	86	8	17	23	16	22	–	–	–	–	–	35
Ikedako	36	Kagoshima	6	–	–	–	–	–	–	–	6	–	–	36
Unagiike	37	〃	2	–	–	1	–	–	–	–	1	–	–	37

b. Number of management units by number of days engaged in fisheries

Designated lake of marsh		Located prefecture's name	Total	Less than 29 days	30~89	90~149	150~199	200~249	250 days and over	
Total	1		6,496	—	1,397	1,815	1,032	952	1,300	1
Notoriko	2	Hokkaido	25	–	–	3	4	15	3	2
Abashiriko	3	〃	48	–	2	3	8	10	25	3
Tofutsuko	4	〃	13	–	–	1	1	7	4	4
Mokotoko	5	〃	6	–	–	–	–	1	5	5
Onuma-konuma	6	〃	17	–	2	10	2	1	2	6
Toyako	7	〃	18	–	6	12	–	–	–	7
Toroko	8	〃	24	–	13	10	1	–	–	8
Akanko	9	〃	3	–	2	–	–	–	1	9
Ogawaranuma	10	Aomori	291	–	102	91	58	21	19	10
Towadako	11	Aomori·Akita	57	–	3	6	27	21	–	11
Hachirogata	12	Akita	346	–	94	147	66	25	14	12
Hibarako	13	Fukushima	44	–	44	–	–	–	–	13
Inawashiroko	14	〃	38	–	14	20	3	1	–	14
Kasumigaura	15	Ibaragi	1,054	–	83	223	200	249	299	15
Hinuma	16	〃	195	–	119	51	19	6	–	16
Kitaura	17	〃	617	–	68	259	115	78	97	17
Sotonasakaura	18	〃	260	–	12	45	91	81	31	18
Chuzenjiko	19	Tochigi	39	–	30	9	–	–	–	19
Teganuma	20	Chiba	46	–	34	5	2	3	2	20
Inbanuma	21	〃	278	–	130	71	31	17	29	21
Ashinoko	22	Kanagawa	41	–	–	17	7	17	—	22
Fukushimagata	23	Niigata	10	–	5	4	1	–	–	23
Mikata-yonko	24	Fukui	47	–	13	23	5	6	–	24
Shojinko	25	Yamanashi	2	–	–	1	–	–	1	25
Yamanakako	26	〃	30	–	21	9	–	–	–	26
Kawaguchiko	27	〃	22	–	8	3	4	5	2	27
Suwako	28	Nagano	196	–	57	41	19	31	48	28
Kizakiko	29	〃	48	–	28	12	7	1	–	29
Biwako	30	Shiga	1,766	–	179	517	241	254	575	30
Yogoko	31	〃	1	–	1	–	–	–	–	31
Koyamaike	32	Tottori	65	–	35	18	7	2	3	32
Togoike	33	〃	33	–	7	12	8	–	6	33
Shinjiko	34	Shimane	722	–	252	158	96	96	120	34
Kojimako	35	Okayama	86	–	33	33	9	4	7	35
Ikedako	36	Kagoshima	6	–	–	–	–	–	6	36
Unagiike	37	〃	2	–	–	1	–	–	1	37

(3) Member of river fishery cooperative

a. Number of cooperative members by main type of fishery

Prefectures' name in Japan		Total	Fisheries using nets		
			Gill net	Casting net	Others
Total	1	342,667	20,120	52,634	10,503
Hokkaido	2	316	67	–	80
Aomori	3	5,164	81	1,001	340
Iwate	4	7,366	107	1,015	89
Miyagi	5	2,608	92	849	146
Akita	6	6,487	750	621	355
Yamagata	7	12,593	1,048	1,766	288
Fukushima	8	17,916	553	4,328	392
Ibaragi	9	4,139	267	1,912	587
Tochigi	10	29,972	80	5,183	107
Gunma	11	11,592	14	943	76
Saitama	12	6,426	26	2,940	193
Chiba	13	2,374	37	762	263
Tokyo	14	6,054	–	778	5
Kanagawa	15	6,506	–	1,794	62
Niigata	16	10,056	901	2,440	378
Toyama	17	2,249	102	901	352
Ishikawa	18	1,364	107	234	105
Fukui	19	1,812	2	251	58
Yamanashi	20	12,925	–	31	8
Nagano	21	17,724	38	4,820	363
Gifu	22	39,014	3,503	2,452	1,234
Shizuoka	23	11,389	7	1,391	189
Aichi	24	8,144	517	154	98
Mie	25	10,276	715	778	238
Shiga	26	2,892	2	261	139
Kyoto	27	6,103	2,102	667	291
Osaka	28	531	28	59	2
Hyogo	29	9,837	1,610	1,109	206
Nara	30	8,670	100	35	21
Wakayama	31	8,057	301	943	132
Tottori	32	1,079	–	399	31
Shimane	33	6,115	964	1,707	345
Okayama	34	6,250	933	1,163	163
Hiroshima	35	7,636	845	1,655	240
Yamaguchi	36	3,914	209	117	53
Tokushima	37	6,567	593	310	304
Kagawa	38	–	–	–	–
Ehime	39	6,385	207	1,124	446
Kochi	40	7,374	949	1,281	425
Fukuoka	41	1,260	743	115	56
Saga	42	919	3	189	9
Nagasaki	43	219	–	2	100
Kumamoto	44	2,900	374	631	232
Oita	45	7,508	450	806	230
Miyazaki	46	11,713	441	2,379	878
Kagoshima	47	2,272	252	338	194
Okinawa	48	–	–	–	–

b. Number of cooperative members by number of days engaged in fishery

Angling & long line	Others	Total	Less than 29 days	30~89	90~149	150 days and over	
242,016	17,394	342,667	228,378	98,866	11,987	3,436	1
97	72	316	88	179	14	35	2
3,301	441	5,164	3,140	1,679	216	129	3
6,072	83	7,366	5,269	1,853	178	66	4
1,401	120	2,608	1,556	798	229	25	5
4,361	400	6,487	4,657	1,507	260	63	6
9,023	468	12,593	9,001	3,211	301	80	7
12,347	296	17,916	11,740	5,615	510	51	8
845	528	4,139	1,725	1,505	598	311	9
23,959	643	29,972	22,510	6,558	828	76	10
10,398	161	11,592	8,090	3,157	289	56	11
3,139	128	6,426	4,205	1,929	249	43	12
697	615	2,374	1,358	515	279	222	13
5,243	28	6,054	1,521	4,115	256	162	14
4,623	27	6,506	2,836	3,364	246	60	15
5,203	1,134	10,056	6,498	3,104	383	71	16
757	137	2,249	1,427	633	132	57	17
918	–	1,364	1,061	254	48	1	118
1,434	67	1,812	1,049	581	162	20	19
12,856	30	12,925	10,365	2,257	240	63	20
12,291	212	17,724	13,005	4,123	411	185	21
31,165	660	39,014	31,585	6,758	551	120	22
9,715	87	11,389	6,422	4,690	232	45	23
7,181	194	8,144	4,884	2,526	664	70	24
6,357	2,188	10,276	6,491	3,522	222	41	25
2,306	184	2,892	1,658	1,131	84	19	26
2,963	80	6,103	3,222	2,604	246	31	27
441	1	531	332	183	16	–	28
6,751	161	9,837	7,886	1,717	176	58	29
8,447	67	8,670	6,954	1,611	93	12	30
5,867	814	8,057	6,214	1,710	112	21	31
642	7	1,079	604	360	91	24	32
3,007	92	6,115	3,589	2,118	324	84	33
3,365	626	6,250	3,397	2,426	342	85	34
4,637	259	7,636	3,650	3,522	416	48	35
3,282	253	3,914	2,059	1,688	143	24	36
4,220	1,140	6,567	3,693	2,094	587	193	37
–	–	–	–	–	–	–	38
3,839	769	6,385	4,138	2,074	132	41	39
3,232	1,487	7,374	5,096	1,948	217	113	40
284	62	1,260	195	643	232	190	41
491	227	919	657	179	63	20	42
44	73	219	92	122	5	–	43
1,519	144	2,900	1,652	972	223	53	44
5,294	728	7,508	4,728	2,539	198	43	45
6,667	1,348	11,713	6,936	3,917	691	169	46
1,335	153	2,272	1,143	875	98	156	47
–	–	–	–	–	–	–	48